

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.



EASTERN EDITION.

VOL. XV. NO. 19.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, JULY 1, 1892.

TERMS (50 CENTS A YEAR.
24 NUMBERS.)

The Circulation of FARM AND FIRESIDE
this issue is

250,500 COPIES.

The Average Circulation for the 24 issues of
the last 12 months has been

273,158 COPIES EACH ISSUE.

To accommodate advertisers, two editions
are printed. The Eastern edition being
100,200 copies, the Western edition
being 150,306 copies this issue.

Farm and Fireside has More Actual
Subscribers than any Agricultural
Journal in the World.

Current Comment.

IN this number FARM AND FIRESIDE devotes unusual space to one subject. The subject is of unusual importance. It lays before its readers a brief history and the successful results of a long line of painstaking experiments and investigations in "Protective Inoculation Against Swine-plague, or So-called Hog-cholera." It is unnecessary to dwell upon the great value of the discoveries now freely and fully made known to the public through these columns. That will be apparent to all.

The original discoverer of the microscopic parasite, *Bacillus suis*, which is the exciting cause of swine-plague, has finally crowned the patient work of years with the discovery of a method of inoculation that will protect the animals against the disease, and save millions of dollars annually to the swine-breeders of the country.

As will be seen from the article, what has been discovered is not a *cure*, but a *preventive*. What is described is a method of successfully protecting swine against swine-plague by artificial inoculation with weakened virus, or attenuated bacteria, of the same kind by which the disease itself is caused.

The results now given to the public are the successful results of experiments and tests of the inoculation for the prevention of swine-plague made independently of the work of all other investigators in the same line, and are not to be confounded with anything that has been done by them.

The material used for protective inoculation against swine-plague can be properly prepared only by skilled bacteriologists, just as vaccine virus for the prevention of smallpox is now prepared by experts. The inoculation, however, does not require a skilled veterinarian, but can be performed by any competent person who has been properly instructed.

For more than a year the publishers of FARM AND FIRESIDE have been making liberal donations to enable its veterinary editor to complete his investigations, and they now take pleasure in giving to the public the successful and practical results of that work, which will directly benefit every farmer and stock-raiser in the land.

A careful study of the article is asked of all readers interested in the subject. And all readers are respectfully reminded that in enterprise for the benefit of the people, this semi-monthly journal is not one whit behind the greatest daily newspapers of the country, their claims to the contrary notwithstanding.

BELIEVING that its readers would be interested in learning something about the man in connection with his work, FARM AND FIRESIDE publishes the following brief sketch of his life:

Dr. H. J. Detmers, professor of veterinary surgery in the Ohio State University, and veterinary editor of the FARM AND FIRESIDE, is a native of the grand duchy of Oldenburg, in northern Germany. He was born in 1833, on the 15th of April, and consequently is now fifty-nine years old. His parents, well-to-do people, sent him to the public school of his native village before he had completed his sixth year. He attended this school until he was thirteen, when he was sent to the gymnasium (college, or preparatory school for German universities) in the city of Jever. He left this institution after he had completed his seventeenth year, and from that time until he was twenty-two devoted himself to practical farming.

When twenty-two he concluded to study veterinary medicine, and entered as a student the Royal Veterinary School, now the Veterinary High-school, in the city of Hanover, at that time the capital of the kingdom of the same name. He remained two years in Hanover, and then went to the Royal Veterinary School, now Veterinary High-school, in Berlin, then the capital of Prussia, and now of the German empire, where he remained one year, and completed his studies.

After this he returned to his native state, the grand duchy of Oldenburg, and in January, 1859, passed his state examination, in which he was awarded a first-class certificate, an honor which had been bestowed only upon two other veterinarians among the thirty-three at that time in the grand duchy. With this he received license to practice, and the village of Sufeld, in the district of Budjadrigen was assigned as his residence. Sufeld not being a very desirable place to live, on account of the prevalence of malarial diseases, he was, on his petition, permitted in 1861 to change his residence to his native district, Jeverland, where he soon succeeded in building up an extensive and lucrative practice.

Meanwhile the grand ducal government had established an agricultural college at Nuremberg, a pleasantly located village near the Hanoverian border. The authorities, it seems, experienced some difficulty in finding a veterinarian qualified to teach veterinary science and animal husbandry in the new institution, and Dr. Detmers was asked by the men in charge—the trustees of the institution, and at the same time high government officers—through the veterinary surgeon-general, to make application for the position. Although he at that time was well situated, perfectly satisfied with his position, and knew very well that the place offered would be much less remunerative than his established practice, he concluded that after all it might be best to comply with the wishes of the men in power. The new place was immediately awarded to him. This was in 1863.

He soon found, however, that the salary was insufficient, particularly since the practice, although extensive enough, was rather unremunerative. He therefore handed in his resignation in the summer of 1865, and asked either to be allowed to go back to his old place, or to be given another government position in Euten, in the principality of Luebeck, to which he considered he was entitled, being one of the few veterinarians holding a first-class certificate. His resignation was not accepted, and his petition, in consequence, not granted, probably because just then nobody qualified to take his position was available.

Therefore, having made up his mind to leave, and knowing very well that if he left without the permission or consent of the government, which had been denied him, he would never again have to expect any favors from the authorities of such a small commonwealth, and would have great difficulty to obtain another place, he concluded to emigrate to America. Having once made up his mind, he immediately made his arrangements, and secured passage for himself and family (wife and three children) on the first suitable vessel that sailed. It happened to be

the bark "Thierman," from Brake, which, after a long and stormy voyage, landed in New York on the 3rd of November, 1865.

Arrived in New York, but not understanding any English, Dr. Detmers thought it would be best not to remain in the East, but to go west to some small city, with just enough German inhabitants to enable him to get along, and not so many as to make it unnecessary to learn English. The only place of that kind in which he had any friends and acquaintances was Dixon, Illinois. There he consequently went. After having resided in Dixon about three years, and having acquired enough knowledge of the English language to do business in a larger city, he concluded to leave, and to go to Chicago. A friend, however, persuaded him to go to Quincy, Illinois. This he did, but for reasons not necessary to explain, it proved to be a bad move. It was in 1868. Still, the residence in Quincy was of comparatively short duration. In the winter of 1870-71, a call as lecturer on veterinary science in the Illinois-Indiana University, in Champaign, Illinois, was received and accepted, and the duties of that institution entered upon soon after.

Nearly two years later, in the winter of 1872-73, a position as professor of veterinary science and animal husbandry in the Kansas State Agricultural College, at Manhattan, Kansas, was accepted. This position was retained until 1875, when the management of the college passed into the hands of a lot of politicians inimical to the course pursued by the outgoing managers of the institution. As a consequence, three professors, namely, B. F. Mudge, who enjoyed a national reputation as one of America's ablest geologists, Major F. E. Miller, professor of agriculture, and H. J. Detmers, professor of veterinary science and animal husbandry, had to leave. The latter quietly removed to his farm in Pottawatomie county, which he had been able to buy with his earnings.

In the spring of 1878, after having lived on his farm about three years, he concluded to carry out his former project, and to move to Chicago to practice. This was done in April, and soon a very fair practice was established, when, in August, 1878, an invitation from the national commissioner of agriculture, Gen. Wm. G. Le Duc, to enter the service of the department of agriculture as an investigator of infectious diseases of live stock, was accepted. The first work engaged in was an investigation of swine-plague, or so-called hog-cholera. The result of this investigation is known to most of the readers of the FARM AND FIRESIDE. Dr. Detmers remained in the service of the department of agriculture until 1884, when, under Commissioner Geo. B. Loring, a bureau of animal industry was established, and when the intrigues, bickerings, petty annoyances and persecutions in Washington had become more than he could stand he concluded to quit. Meanwhile he had removed his residence from Chicago to Champaign, Illinois, his former home.

After leaving the department of agriculture, he remained one year as a private practitioner at Champaign, Illinois, and then went to Columbus, Ohio, as professor of veterinary surgery in the Ohio State University, where, acting chiefly upon his representations, the board of trustees had added to the other departments, a school of veterinary medicine. This position he holds now. For the last three years he has conducted the veterinary columns of the FARM AND FIRESIDE.

What he has done for the advancement of veterinary science and in ascertaining the causes of infectious diseases has been published in numerous shorter articles contributed to periodicals (mostly agricultural) and in his reports to the commissioners of agriculture.

SIGNAL's Lily Flagg, by right of merit, now reigns the queen of the dairy. Under the official inspection of the American Jersey Cattle Club and the *Jersey Bulletin*, she finished a year's test the last day of May, making a record of one thousand and forty-seven pounds and three quarters of an ounce of butter, from

ten thousand, nine hundred and fifty-four pounds and eight ounces of milk. The record of the official test for the last seven days of the year is twenty-seven pounds and three and one half ounces of butter, from one hundred and eighty-nine pounds and seven ounces of milk; a pound of butter to less than seven pounds of milk. The annual average yield was one pound of butter from less than ten and one half pounds of milk. This remarkable cow is now eight and one half years old, and dropped her seventh calf last January.

MR. TALCOTT's second article on ensilage and the dairy, which appears on another page of this number, contains some valuable points, to which special attention is directed. First, the actual cost of ensilage and of producing milk are given by a business man who is not farming for fun, but for the money there is in it. The cost of keeping a cow a year on pasture grasses in summer and ensilage in the winter is placed in round numbers at \$15. This is considerably lower than the estimate used in the comment in June 15th issue, on the comparative profits given by the summer cow kept in the ordinary way, and the winter cow fed on ensilage. The figures used were all on the safe side, and in the light of the present article it can be safely said that co-operative winter dairying, with ensilage feeding, can more than double the net profits of the business.

"The best butter made in the world need not cost ten cents a pound, and the best full cream cheese need not cost over five cents a pound," and "the farmer, in this age of competition, is bound to produce for less or go to the wall," says this practical dairyman and business man. The key-note of these articles is "produce for less." It is the best remedy for hard times.

This is the same gospel practiced by Mr. Terry at home, and preached by him in a lecture last winter at the Ohio State University. Said he:

"Hard times do exist, and since they are here, the proper thing to do is to seek for their remedy. The farmer is not at present receiving sufficient pay for his services, but many are looking in the wrong direction for help. To have more money, we must either increase the amount that we receive or decrease the amount that we expend. The former can best be done by more careful farming and better crops, and the latter by reducing the cost of production. These are the true and the best remedies for hard times. The farmer can reduce the cost of production by better methods and by growing more bushels per acre."

Mr. Terry illustrated this by telling how he had increased the yield and reduced the cost of the potato crop. Apply the lesson to every farm crop, and agricultural depression will be at an end.

FRANCE and Germany have formally accepted the invitation of the United States to send delegates to an international money conference. It is unofficially announced that England will join. This monetary conference is to be held for the purpose of establishing an international ratio between gold and silver. If accomplished, this means the free use of both metals as money by the leading commercial nations of the world.

Our Farm.

[Copyrighted, all rights reserved.]

PROTECTIVE INOCULATION AGAINST SWINE-PLAGUE, Or So-called Hog-cholera.

BY H. J. DETMERS,
Professor of Veterinary Surgery, Ohio State University,
Columbus, Ohio.

INTRODUCTION.

All known infectious diseases, it cannot any more be denied, are caused by parasites. The parasites alone, however, are not sufficient to cause the morbid changes which produce the symptoms and constitute the disease—at least, they cannot do it under all circumstances. The animal organism must be in a proper condition to afford a suitable medium for the development of the pathogenic properties of the parasites; in other words, the organism must possess sufficient predisposition. Consequently, two causes, an exciting cause, consisting of the presence of the specific pathogenic parasites, and a predisposing cause, or a condition of the organism or its tissues answering the requirements of the specific parasites for pathogenic action, are necessary to produce infectious diseases. When one of these causes is wanting, an infectious disease will not make its appearance. This may not, with equal force, apply to all infectious diseases, because some pathogenic parasites are less particular than others in regard to surroundings, composition of medium, temperature, etc., and therefore require less predisposition in the animal organism.

Infectious diseases, which require two causes, and cannot develop if one of them is wanting, can be prevented if only one of these causes is warded off or destroyed. Consequently, these diseases can be prevented in two different ways: First, by destroying or removing the exciting cause, or by preventing an exposure of the animal organism to its influence, and secondly, by causing the animal organism to become an unfit medium for the development of the pathogenic properties, and, perhaps, for the propagation of the parasites themselves, by creating conditions unsuitable, or even inimical, to their existence. The former method, consisting of the destruction, etc., of the pathogenic parasites, constitutes, it must be admitted, under all circumstances the surest preventive, especially if the pathogenic parasites (certain bacteria, for instance) are not very particular in regard to surroundings, composition of medium, temperature, etc. But the same is usually very difficult, or even impossible, especially where we have to deal with disease-producing (pathogenic) organisms (bacteria, for instance) which are not compelled to lead a strictly parasitic life, or depend for their existence upon a certain animal organism as a host, but can and do exist and multiply as saprophytes on or in many or various things, such as soil, water and various other substances of an organic origin; because these bacteria may be present and invade an animal organism where and when it is least expected.

On the other hand, a susceptible or predisposed animal organism can frequently be converted into an unsuitable medium. It has been found that in quite a number of infectious diseases one attack, terminating in recovery, destroys, either for some time or forever, the existing predisposition—produces immunity—and thus prevents any further infection. It has further been found that the existing predisposition will be destroyed, as well by a very mild attack as by a severe one, and that it does not make much difference whether the same is brought on by an artificial or by a natural infection. But about this later.

CLASSIFICATION OF PARASITES.

The parasites or micro-organisms (bacteria), which constitute the exciting cause of infectious diseases, may, as above indicated, be divided into two classes; namely, in true or obligate parasites, and in incidental or facultative parasites. The difference is this: The former are dependent for their existence, development and propagation upon conditions, which, unless artificially produced, can be found only in a living animal organism, and therefore cannot permanently exist in the

outside world. They require a living host, and therefore are true or obligate parasites.

Some, however, are more particular in regard to the conditions required than others, and pathogenic, or even parasitic, only to certain genera and species, while others are less so, and thrive, and develop their pathogenic properties in several genera and species of the animal creation. As representatives of these obligate parasites may be considered the micro-organisms or bacteria of tuberculosis (*Bacillus tuberculosis*), of leprosy (*Bacillus leproe*), of glanders (*Bacillus mallei*), of smallpox (*Micrococcus variol.*), of pleuropneumonia (*Micrococcus of pleuropneumonia*), of syphilis (*Bacillus syphilis*, of Lustgarten), etc. (The three last named micro-organisms have not yet been definitely identified.)

The facultative parasites, on the other hand, find their means of existence, development and propagation in the outside world, lead a saprophytic life, are not, most of them at least, very particular in regard to temperature and surroundings, and only incidentally enter the living animal organism, either with the food, the water for drinking, or adhering to particles of dust and floating in the air, and then finding congenial quarters and suitable conditions, become parasitic and develop their pathogenic properties. To this class belong some of the most dangerous or malignant pathogenic bacteria known. The bacilli of anthrax, of abdominal typhus, of Asiatic cholera, of diphtheritis, of swine-plague, probably those of the grippe, etc., constitute good representatives of this class.

There are still other bacteria, which may be called pathogenic, although the same do not seem to be able to propagate to any extent inside of the living animal organism. They cause disease, it seems, exclusively by their poisonous products—their toxalbumines. But the diseases thus produced, which may be called intoxication-diseases, are never directly communicated from one animal to another, and are somewhat characteristic by the paralytic effect of the poisonous substance upon the nerve centers or portions of the nervous system. To this class belong, for instance, the micro-organisms of poisonous dried beef, poisonous head-cheese, poisonous milk, poisonous ice-cream, puerperal paresis or paralysis, and probably also those of southern or Texas cattle fever, etc. These diseases, however, not being communicable from animal to animal, do not at present concern us.

THE PREDISPOSITION.

The predisposing cause, or the predisposition of the animal organism to certain infectious or parasitic diseases, may be congenital, or be acquired, may only be slight or may be well developed, and also may be partially or totally destroyed, and be partially or fully reproduced again. In several infectious diseases the existing predisposition is partially or fully wiped out by the first attack, which, if terminating in recovery, will render the person or animal protected, either for a certain length of time (that is, until the predisposition is again reproduced) or, in some diseases, probably for life—if the conditions required for the pathogenic action of the bacteria are never again restored.

In other infectious diseases, however, just the reverse takes place. The first attack, if terminating in complete or partial recovery, and every subsequent one, increase the existing predisposition. Hence, infectious diseases may be divided into two classes; namely, diseases in which the existing predisposition is destroyed by the first attack, and diseases in which the same is increased, not only by the first, but also by subsequent attacks. The former, therefore, occur but once in the same person or animal, or at any rate not again until the lost predisposition has been restored. To this class belong several, especially exanthematous, diseases, such as smallpox, scarlet fever, measles, but also others, such as pleuropneumonia of cattle, horse distemper, etc., and, as will be shown later on, swine-plague, or so-called hog-cholera. The latter class of infectious diseases, which by each new attack increase the existing predisposition, have their representatives in erysipelas, pneumonia, catarrhal affections, gonorrhea, etc.

But as it is the former class which includes swine-plague, or so-called hog-

cholera, the disease under consideration, I will dismiss the latter. It is only the former class in which a protective inoculation, producing a mild or not dangerous attack, but destroying the predisposition, and thus producing immunity against future infection, is and can be practiced.

PROTECTIVE INOCULATION NOT NEW.

Protective inoculation, however, is not by any means a new thing. According to their records it has been practiced against smallpox for 3,000 years by the Chinese. The lymph used for inoculation was taken from a mild case, and other safeguards were applied to prevent the inoculation-disease from becoming malignant. This, of course, could not always be prevented by the means applied. Still, the mortality was considerably reduced. At the end of the last century the immortal Jenner made the great discovery that an inoculation with the lymph of cowpox—a vaccination—though not producing a dangerous disease, but only a local affection, would equally well extinguish the existing predisposition, and protect the vaccinated persons at least for several years against an infection with that dreaded plague, smallpox. The incalculable benefit conferred upon mankind by Jenner's discovery is well known.

It has not yet been decided whether the virus of cowpox is simply a mitigated smallpox virus, or whether the bacteria are only similar in their effect, but otherwise different and distinct. Pasteur accepted the former opinion, and based upon it his protective inoculation experiments. He first experimented with the bacilli of chicken cholera, of anthrax and of rouge, a swine disease, known in Germany as "*Rothlauf*," and in England as "*red soldier*," and endeavored to mitigate the pathogenic properties of the cultivated bacilli in an artificial way. In this he admirably succeeded, but he failed to give a clear or definite account of how it was done. He supposed the mitigation was effected by an access of oxygen, and also by an exposure of the cultures to a temperature considerably above that of the blood of a living organism.

Dr. Koch, who took up, or rather tested, Pasteur's experiments, found that an access of oxygen is immaterial, but that a temperature of forty-two to forty-three degrees centigrade, acting for several days upon the culture, produces the desired mitigation and makes a pure culture of *Bacillus anthracis* suitable material for a protective inoculation. It is, however, not my object, and time and space will not allow me, to dwell at length on the experiments of Pasteur, Koch and their assistants and associates. Neither will I say anything about the practical value of a protective inoculation against anthrax, rabies, chicken cholera and several other diseases. It will not be necessary. The *Arbeiten und Mittheilungen aus dem Kaiserlichen Gesundheitsamte*, the publications of Pasteur and his associates, and numerous other works and articles in periodicals contain full accounts.

BRIEF HISTORY OF MY EXPERIMENTS.

As may be known to many of my readers, I have done some original work in bacteriological research, especially on swine-plague, or so-called hog-cholera, since 1878, and from that time until now it always has been my endeavor to work for practical results—results which would directly benefit the farmer and stock raiser. At the beginning of my investigation, in September, 1878, I found swine-plague to be an infectious disease, caused by a specific bacterium, which I called "*Bacillus suis*." I made numerous inoculations on healthy animals with minimal quantities of virus, and never failed to produce the characteristic morbid process in due time. I also found that a pig that had recovered from an attack of swine-plague, no matter whether caused by a natural infection or an artificial inoculation, as a rule resisted all further attempts to again infect it, either by an exposure or by artificial inoculation. It proved to possess immunity.

I say "as a rule," because I found a few animals to which a second, but only mild, attack could be communicated by an inoculation (in one case), or by an exposure to a natural infection (in a few cases). I even had an opportunity to observe a second and a third attack in one animal. The same had three attacks within a year and a half and survived them all. The last was the mildest, and the first, according

to reliable information, the severest. Hence, I was able to establish the fact that swine-plague, by its first attack, if the same does not become fatal, in a large majority of cases destroys, and in all cases at least diminishes, the existing predisposition. I also found a few animals (amounting to about one or one and one half per cent. of a herd) which either did not possess any predisposition at all, or in which the same had been extinguished by a very mild attack that remained unobserved. At that early date, in the fall of 1878, it was not yet known, at least not in America, how to proceed to separate the pathogenic bacteria from all others accidentally present, and to make reliably pure cultures. Favored by accident, sometimes a pure culture may have been obtained, but it was an exception.

Dr. Koch had not yet introduced his solid culture media; plate cultures were unknown, and apparatus for sterilization were yet in their infancy. Therefore, progress was necessarily slow. Besides that, my experiments were interrupted by other work, and were not taken up again until 1886, at a time when any one at all familiar with the methods of bacteriological research had no difficulty in making pure cultures, even if it had to be done with very simple, home-made apparatus; at any rate I had no other. I had several pure cultures of *Bacillus suis*, and quite a number of them several generations remote from the hog, but to my great surprise an inoculation of a healthy animal with such a pure culture failed to produce a plain outbreak of the disease. A pig inoculated with a minimal quantity of a pure culture only showed a slight reaction—was a little off his feed on the sixth and seventh days after the inoculation; and even rabbits, inoculated with a minimal quantity of the same material (a nutrient gelatine culture) remained exempted from a plain attack of swine-plague.

The inoculation was made with a small inoculation needle inserted beneath the skin of the external surface of the ear, or precisely in the same way and with the same instrument used in 1878 and 1879, when every inoculation with material directly from a sick hog (in most cases lung exudates or blood serum) was followed in due time by a plain and fatal attack of swine-plague. Second and third inoculation of the same animals, made two or three weeks later, had either no visible effect whatever, or only caused a hardly observable reaction. There was no doubt the malignant properties of the bacilli in my cultures were weakened. But having only one pig and a few rabbits at my disposal—the pig was inoculated thrice, the third time without any effect whatever—the experiments, interesting as they were, had to be dropped. If the experimental animals had promptly died, or if I had been willing to advance theories which could not yet be proved, I might have obtained more. But as it was, the experiments again suffered an interruption until September 1888, when I met with the same results, but also with the same fate; namely, want of experimental animals and want of support.

Finally, in the spring of 1891, I became enabled by a liberal donation from private parties, Messrs. Mast, Crowell and Kirkpatrick, of Springfield, Ohio, to again take up my investigation, and to subject the efficiency of the protective inoculation to very thorough and very extensive tests. The former were made not only in my laboratory, where the inoculated animals were afterward subjected to inoculation with virus of undiminished pathogenic properties, and compelled to eat diseased parts of pigs that had died of swine-plague, but also on several farms, where, with the kind co-operation of the owners, the pigs protected by inoculation were exposed in every conceivable manner to a natural infection. I therefore take this opportunity to acknowledge my gratitude to Mr. Owen Harbage, West Jefferson, Madison county, Ohio, to Mr. James Riley, Thorntown, Indiana, and to ex-Senator Wilson, London, Ohio, for the great interest they have taken in my work and the valuable assistance they have rendered me. The

EXPERIMENTS ON THE FARMS

were conducted in the following way: The pigs, about two weeks after they had received the protective inoculation,

were ringed (by Messrs. Harbage and Wilson), then taken into a hog-lot in which the disease prevailed and which contained sick and dead animals.

On Mr. Harbage's farm the inoculated pigs, half an hour after their arrival, and immediately after they had been ringed, and consequently their noses wounded and made sore, were given an opportunity to feast on the carcass of a hog that had just died of swine-plague. Having been shipped by express, and being hungry, they immediately availed themselves of the opportunity and made a good, square meal of their dead companion. These pigs were kept in the infected hog-lot and among diseased pigs until the disease had died out for want of material, when they were taken to a neighboring farm where the disease was yet prevailing, and there also compelled to eat, drink and sleep with sick and dying pigs. After the disease had died out on this farm, too, the inoculated pigs, which were very thrifty, were sent to other places to board where swine-plague was yet prevailing, until they grew big and fat and were sold and shipped as nice, fat hogs. They never refused a meal, and never showed any symptoms of disease.

The experiments conducted by Senator Wilson and by Mr. James Riley were of the same character, and met with the same results. On Mr. Riley's farm all uninoculated control pigs, nine in number, when exposed, took the disease in due time and died, while all those that had been inoculated never refused a meal, no matter how much exposed to a natural infection, and remained healthy and thrifty. As to the extensive tests, I do not think it will be necessary to go into details, and therefore will only say that during the last year, or since May, 1891, quite a large number of herds, small and large, composed of any number of animals, from a few (five or six) to over six hundred (one in Ross county), and distributed over seven counties in Ohio and one in Indiana, have received the protective inoculation. The whole number of animals inoculated within the past year is a trifle over two thousand. All the inoculations, because made for the purpose of testing its value as a means of protection, were made free of charge, but with the condition that the owner of the inoculated animals had to send in one or more correct and truthful reports.

All the reports thus received, with the exception of a few, which will receive special attention further below, are favorable almost beyond my fondest expectations. The inoculated animals, notwithstanding that most of them became exposed to a natural infection in various ways, remained healthy and vigorous. At any rate, swine-plague prevailed at some time or other during last summer and fall, in the immediate neighborhood of a large majority of the inoculated herds, and in many cases all around them; and the mortality in the herds not inoculated was fully as great as in other years. Consequently, as none of the inoculated herds were isolated or protected by separation, except during the first ten or twelve days after the inoculation, in a majority of cases at least, abundant opportunities for a natural infection were given. Some of the inoculated herds were surrounded by swine-plague on all sides, and nearly all of them were exposed to an infection.

As mentioned above, reports somewhat unfavorable—on their face at least—were received from four small herds, composed each of about fifty animals or less. Two of these herds had been exposed to a natural infection, and contained a few sick animals when the inoculation was made. The latter, consequently, added fuel to the flame, at least in all animals already infected, and therefore no wonder that deaths occurred.

In another herd, of which it is not positively known that it had become invaded by the disease at the time of inoculation, also a few cases of sickness and even a few deaths, but a few only (two or three), occurred. This herd was inoculated with comparatively small quantities of material, and it is possible, as will be explained later, that the material used for that herd was not strong enough—was not up to what I afterwards determined as normal strength.

As to the fourth herd from which an unfavorable report was received, I have no

doubt whatever that the same was fully protected by inoculation. I had performed the operation myself, and I firmly believe that the deaths which occurred were not due to swine-plague, but to entirely different causes. The case is as follows: The inoculated animals, good, healthy and thrifty pigs, were used to a strict corn diet; but about two months after the inoculation, when already good-sized hogs, and after some pretty hard frosts and considerable wet weather had occurred, the same were suddenly subjected to a severe dietetic change. They were driven into quite a large body of timber, where, according to the statements of the owner, they received no corn, but had to subsist on a good deal of rotten stuff—decayed and decaying vegetation, acorns, nuts, fungi, etc.

A few days after the herd had been in the timber twenty-two took sick, had severe diarrhea, and died. Unfortunately I had no chance to see and to examine them, neither while they were sick nor after they had died. But as the animals all took sick at the same time, as the symptoms, according to the statement of the very reliable owner, were in all cases the same, and only such as occur in very severe digestive disorders—a severe diarrhea constituted the principal one—which is but rarely the case in swine-plague, and as there was abundant cause for a severe digestive disorder, I have no doubt that



PLATE I.

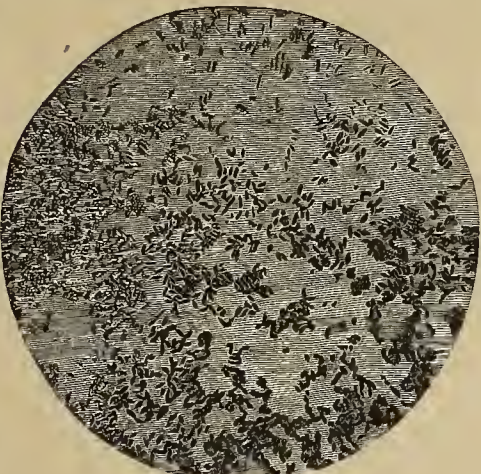


PLATE II.

these deaths had no connection whatever with swine-plague, or so-called hog-cholera.

THE MATERIAL USED FOR INOCULATION.

My inoculation material is nothing more nor less than a pure advanced culture of *Bacillus suis*, the same bacterium which constitutes the cause of swine-plague. How its pathogenic properties are weakened will be explained further below. It is not done by an access of oxygen, nor by high temperature either. My cultures of *Bacillus suis* are kept at the ordinary temperature of the laboratory during the summer months, or while the weather is warm, and in the winter or during the cold season a uniform temperature of twenty-four degrees centigrade is constantly maintained in the incubator by means of the thermoregulator. Consequently, there must be something else that causes a mitigation of the pathogenic properties. The first culture (the first from the sick hog) I prefer to start with blood taken by means of a sterilized vacuum-tube from the right ventricle of the heart of a hog affected with swine-plague immediately after the same has died or has been killed. That such blood must be taken with all possible aseptic precautions may not need any mention. If a healthy animal is inoculated by means of an inoculation needle with a very small quantity of this first culture, after the latter is, say, a week old and fully developed, the effect is not very certain.

In some cases a severe and even fatal attack of the disease may be produced, while in others only a comparatively slight reaction will follow. Hence, such a first culture is not suitable inoculation material, notwithstanding that it undoubtedly will destroy the existing predisposition. Its effect upon the inoculated animal is apt to become too severe—at any rate, is too uncertain.

A second culture, that is, new culture, started with material (bacilli) of the first culture, is, if used when a week or ten days old, probably a little more reliable, and an inoculation with it may not have so severe an effect, but it is not safe enough to be used, because the mitigation of the pathogenic properties of the bacilli is hardly so firmly established as to exclude the possibility of a restoration to its original malignancy, and a consequent spreading or an outbreak of the disease from the inoculated animals. Besides that, the quantity to be inoculated with tolerable safety would have to be too small to get it accurate; that is, neither too large nor too small. And further, solid cultures, unless mixed with sterilized distilled water, are not very convenient material for inoculation; and even if distilled water is used, it would be very difficult to calculate the amount of bacilli contained in a given quantity—in a cubic centimeter, for instance. It is therefore necessary, in order to get good, safe and convenient inocula-



PLATE III.

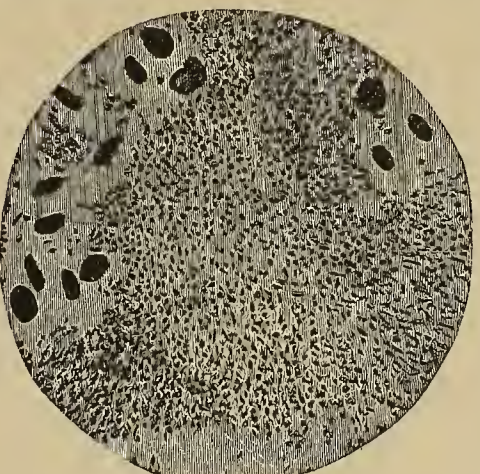


PLATE IV.

tion material, to start a new culture in a fluid medium with a culture far enough advanced (say about the fourteenth from the hog) to be assured of perfect uniformity and a sufficient mitigation of the pathogenic properties of the bacilli.

As a fluid culture medium, I use sterilized beef-water peptone. While it requires but ordinary precaution to start a solid culture, or to inoculate over from one solid medium to another, great care, special precaution and quick manipulation are required if a fluid medium is inoculated and a pure culture expected. A description of the *modus operandi* will not be necessary, because it cannot be expected that any one but a bacteriologist will ever succeed.

In the summer my solid cultures are made in beef-water peptone agar-agar (nutrient agar), and in the winter either the same material is used, or beef-water peptone gelatine is substituted. I said above, the lowest (that is, nearest to the hog) culture I begin with is the fourteenth, because in a lower culture, or in one less remote from the blood of the hog, I do not expect to find the mitigation of the pathogenic properties constant enough, notwithstanding that this mitigation already begins in the first culture. I inoculate over from one culture to another when the culture from which I want to inoculate is not less than ten and not more than fifteen days old; consequently, it takes at least half a year to get the fourteenth culture.

It may now be asked what causes the

mitigation of the pathogenic properties of the bacilli, which already begins in the first culture. I have shown that it is neither access of oxygen nor high temperature, because the first has been disproved by Dr. Koch; and as to the second, my cultures never were exposed to a higher temperature than that of an ordinary room. Therefore, it can be nothing but what is contained in the culture medium, or rather, culture itself. About what that may be, I will not advance any theories, which it might be difficult to verify by unobjectionable proof. Only one thing is sure, the mitigation is progressive and increases a little with each successive culture. (*) Hence, if my cultures are getting too far advanced (†) I inoculate a rabbit with a fatal dose, such an one as will kill the rabbit on the sixth or seventh day after the inoculation. I then start a new culture in a solid medium with the blood of the rabbit, and with the second culture from the rabbit I inoculate my fluid to be used for inoculation.

All the inoculating from one culture to another is done with a platinum wire, and never more than one wire (a quantity of material that adheres to the bent point of the wire) is used, even if a 100 cubic centimeter flask full of fluid is inoculated. The inoculation material (the fluid culture) is ready for use ten to fourteen days after it has been inoculated. The culture which I use at present is over thirty cultures remote from the hog, but has passed through at least four or five rabbits. The strength of my inoculation material (fluid culture) is such that four tenths of a cubic centimeter, hypodermically injected beneath the skin of the ear of a full-grown rabbit, will kill the latter in six days, while five tenths of a cubic centimeter of the same material will become fatal on the fifth day. One cubic centimeter, injected in the same way beneath the skin of the external surface of the ear of a healthy and vigorous four-months-old pig, will cause a slight reaction on the sixth, or on the sixth and seventh days, in so far as the appetite of the animal will be slightly disturbed on that day or days.

I regard one tenth of a cubic centimeter of my inoculation material for every month the pig is old, provided the same is of normal size and development, as a safe, reliable and sufficiently protecting dose, although, as a rule, it does not produce a visible reaction.

THE INOCULATION.

The inoculation is invariably made beneath the skin of the external surface of the ear, for various reasons. First, the place is accessible; second, if other bacteria, *Staphylococcus pyogenes*, for instance, should intrude, not much damage can be done; third, it is one of the few places on the body of the hog at which connective tissue is easily reached, and at which the inoculation is not frustrated by a thick layer of fat. The instrument employed is the bulb syringe with graduated glass tube, recommended by Dr. Koch. It is preferred because it can, without injuring it, be thoroughly disinfected. It can be obtained from H. Braun, Sons & Co., 24 N. High street, Columbus, Ohio.

THE ILLUSTRATIONS.

Plate I.—*Bacillus suis*, as found in the diseased hog, in blood serum, photographed from a slide prepared October 11, 1888.

800 diameters.

Plate II.—*Bacillus suis*, in the material for inoculation from second culture from rabbit blood from sixteenth culture from the hog, photographed from a slide prepared August 11, 1891.

800 diameters.

Plate III.—*Bacillus (suis?)* of German Schweine-seuche in rabbit blood, photographed from a slide, made by Prof. Kitt, in Munich, Germany, in 1888.

800 diameters.

Plate IV.—Bacterium (bacillus) of German Wildseuche in tonit blood, photographed from a slide, made by Prof. Schuetz, in Berlin, in 1888.

800 diameters.

(*) I also have in my possession pure cultures of *Bacillus anthracis*, in which the pathogenic properties have been reduced by the same means and to such an extent that a quantity large enough to kill an ox, if the pathogenic properties were not reduced, inoculated into a rabbit, will make sick, but will not kill the rabbit.

(†) The one herd, which had probably not been exposed at the time of inoculation, but in which afterward a few animals died, was inoculated with such a too far advanced culture.

As these illustrations are all photographed from nature, and present the object 800 diameters magnified, a description of *Bacillus suis* will not be necessary. I may therefore only say this much, that *Bacillus suis* does not make nutrient gelatine fluid if the latter contains over ten per cent of gelatine, and if the temperature is below twenty-five degrees centigrade. It also may be considered immotile, because, if the temperature is much below blood heat, and if the medium is somewhat viscous, no active motion is seen. In warm blood serum some motion has been observed. A description of its growth in culture media is only of interest to the bacteriologist, and therefore may here be omitted.

The plates, however, plainly show that the micro-organism of swine-plague, *Bacillus suis*, pictured in Plates I and II, is entirely different, notwithstanding the assertion of others, from that of the German Wildseuche, in plate IV. *Bacillus suis* presents a rod-shaped form, and the single bacilli somewhat differ in length; besides that, the same are often united by twos, while the micro-organism of Wildseuche is decidedly oval in shape, of uniform size, and but very rarely united by twos.

Whether the bacilli of the German Schweine-seuche, in Plate III, are identical with our *Bacilli suis*, in Plates I and II, or constitute a distinct species, I am not prepared to decide, and can only say this much, that I have in my possession several slides of pure cultures of *Bacillus suis*, on which the bacilli present precisely the same appearance as those of the German Schweine-seuche.

THE EXPENSE.

In conclusion I wish to say a word in regard to the cost of the protective inoculation. The material used can be prepared, if made in quantities, and if no profit is intended, at a cost of one dollar for one

hundred cubic centimeters, which is about one cent for the dose (one cubic centimeter) required for a full-grown hog. If it is furnished at a price of two dollars for one hundred cubic centimeters, or two cents for a full-grown hog, and one cent for a five-months-old pig, a handsome profit will be made. As to the inoculation, one who is anything of an expert in performing such operations can, with proper help, of course, easily inoculate from forty to fifty hogs an hour, and three hundred to four hundred in a day. Consequently, if large or even if only moderately-sized herds are to be inoculated, the material can be furnished and the inoculation performed at ten cents a head, and at that price excellent wages can be made. To inoculate single animals, or very small herds, would, of course, be more expensive. But any one will see from the above that expense and benefit derived are not at all out of proportion, even if one or two per cent of the animals inoculated should not prove to be protected.

One other point. From my experiments recently made and yet continued, it has become evident that there is no danger of a spreading of the disease from the inoculated pigs, or from the inoculation material.

In giving the above to the public, I will explicitly state that I shall not hold myself in any way responsible for the efficiency or inefficiency of any inoculation material which may hereafter be made or be offered for sale by incompetent parties; neither will I be responsible for any inoculation performed by incompetent men.

RINGING HOGS.

Make some stanchions similar to those with which cattle are fastened, 30 inches high, leaving the slide or lever extend above the frame about 18 inches. Stake this in front of the drinking-trough so the hogs will have to reach through to drink. Push the lever up on Mr. Hog's neck and fasten with a pin, or hold it with one hand and ring with the other.

ENSILAGE AND DAIRY.

No. 2.

I am frequently asked for the cost of ensilage per ton, and also cost of milk per quart or gallon.

No fixed value or cost can be ascertained or named for a basis for all farms or locations. I will give you cost of mine, on a farm of 140 acres, that I have just sold for \$8,400, or \$63 per acre; and at the same time will say that I have another farm of 90 acres, two miles from this one, that will produce more feed and crops than my old farm of 140 acres, because the land is newer and richer, and after this season I shall transfer my dairy business to the new farm, which cost only \$4,000.

For five years past I have raised from ten to twelve acres of ensilage corn each year. The first two years I planted too close together, and raised weak, sour, thin ensilage, and had to feed dry feed and grain to keep my cows in good flow of milk in winter time and in fair condition. For three years past I have grown the southern large, white corn for ensilage, and I find by planting as thin as I do for grain crops, in about one hundred and thirty days from planting my ensilage corn is matured enough for good seed-corn, when I cut it and fill my silos. I have planted my home-grown seed two years by the side of the same variety grown in the South. I find the corn from the seed grown here will not hold full size with that raised from southern seed; that it deteriorates as it becomes acclimated, and I shall not plant home-grown seed again for ensilage.

The manner in which I raise corn on my clay soil, giving it from four to five cultivations, makes the total cost of work on each ten acres about \$70; perhaps not quite \$7 per acre, but I count it at that price. My cutting of the ten acres and filling the silos, for three years past, has been done for an average cost of \$50. My fields vary a little in size; some of them are twelve acres, but \$5 per acre will cover the cost of harvesting the crop and filling the silos, and the field will produce a little more than 200 tons on the average. I have four second-floor silos that hold each 50 tons, and two years I have had from one and a half to two and a half more acres than I could put in my silos. This I shocked and dry-cured in the field, and in the winter time I went through the rough experience of trying, one season, to feed the whole stalks dry, and such a waste and trouble, with big, long pieces of corn-stalks in my manure pile, has stopped that foolish business on my farm.

One winter I made the second job of cutting two and a half acres of this dry ensilage crop cured in the field, and in the month of February, with the mercury at zero and a little below, I hired men, teams and power, and put that ensilage corn from the field up into an empty silo. But deliver me from such a job again. Last year my surplus ensilage that would not go into the silos went right out to the barn floor in a big pile, and it will always be done so after this; and that very same day, October 11th, I commenced feeding it to the cows, raking the top and outside of the pile at every feed until they ate it up. There was very little waste. I intend to raise every year about what will fill my silos, but almost every time I beat my own calculations and have a little pile left.

The ensilage corn I now raise will have over 100 bushels of large ears of corn to the acre, generally nearer 150 bushels, and it is almost fully-matured corn—not glazed hard but in good, hard roasting-car stage. This all goes into the silos, and it makes a sufficient grain ration for all practical purposes to be used in a dairy. In each bushel basketful of the ensilage I find from three to four quarts of good, warm, soft, well-cooked ensilage corn, cob and all, and as we feed a large bushel basketful of this twice a day to our cows, night and morning, they have grain sufficient to produce a good quantity of milk at its minimum of cost in winter time. At noon each day, or at 11 o'clock A. M., I feed clover hay, and as I always have the same-sized clover-field that we do of ensilage, because we run a four years' rotation of crops—corn on sod ground, oats on corn stubble, wheat after oats, followed by clover, and new clover meadow every year—I always have an abundance of clover hay, to give my cows at noon what they will eat up clean in two hours.

The cost of harvesting these ten acres of clover hay every year is not over \$30, but there will be fully twenty tons of good, well-cured clover hay. My five horses live out of this quite largely on what the cows will not eat, but I charge it all up to the dairy, and it keeps in fair condition forty head of cattle, mostly milking cows. Thus, you see, the ten acres of corn for

Labor, paid	\$ 70
Harvesting and filling silo	50
Saving 10 acres hay	30
And \$5 per acre for use of land, same as it costs if you rent it	100

Total

\$250

is the cost of feed consumed on my farm to feed forty head of cattle six months, and usually a little more. The highest price paid for summer pasture here is 25 cents per week per head for grown cattle, and that added to the winter cost of keeping a dairy cow makes only \$6.50 more, or about \$12 actual cost per year per head to the farmer who adopts the silo and ensilage farming.

I have called my cost, in round numbers, at \$15 per year for the last three years. And the cost of my Guernsey cows' rich milk that requires but from sixteen to eighteen pounds for a pound of butter, does not reach one cent per quart, while Holstein and Ayrshire cows' milk will not cost over one half to three fourths of a cent per quart, which weighs two pounds. The best butter made in the world need not cost ten cents per pound, and the best full cream cheese need not cost over five cents per pound, if made from ensilage-fed cows in winter and pasture grasses in summer.

The farmer, in this age of competition, is bound to produce for less or go to the wall. He has no excuse for waste or extravagance on the farm; he is not justified in committing it. He should no longer waste time and money to husk and dry corn for cattle feed; and then shell it and haul it to mill, and give one eighth or one tenth of it to the miller for toll, for cattle feed. There is no earthly use to try to produce milk on the farm with high-priced ground feed of any kind, bran, shorts, oil-meal or cotton-seed meal. It is only permissible to do so to fatten cattle speedily for the butcher's block. Nothing is needed but good, well-matured corn ensilage, clover hay and fresh pasture grass to produce milk, butter or cheese in a sensible and practical manner.

City dairies who kill customers with milk from still slops and ground feed must use the poison city stable, air and water, and dry feed for the production of milk. Until a wise government, on sanitary grounds, abates this nuisance and crime, it will continue.

Farmers who are honestly trying to succeed will find the above method the best and most practical one for the farm. Holstein cows will produce annually six thousand to eight thousand pounds of milk from this \$15 worth of feed I name, or three thousand five hundred quarts of milk.

Ayrshire cows will overrun five thousand pounds of milk from this same feed, and Guernsey and Jersey cows will furnish from three to four thousand pounds of milk annually at this \$15 cost. And is legislation or the farmer to blame if he don't make money on the farm?

H. TALCOTT.

CORN CULTURE.

One third of all the land that is cultivated in the United States raises Indian corn.

We raise sixteen bushels of corn for each man, woman and child. This is more per inhabitant than the total cereal production of Europe. Hence, anything which may be added to the culture of Indian corn, however little, is justified on account of the enormous importance on the subject.

In speaking of the cultivation of corn, I shall confine myself entirely to that cultivation of the land which is done after the corn is planted. I will assume that the corn has been planted in a deep and well-prepared seed-bed, which in general I believe to be an essential condition of successful corn culture.

WHAT DOES CULTIVATION DO?

It kills weeds and stirs the soil; two entirely different things, although stirring the soil kills the weeds.

WHAT HARM DO WEEDS DO IN A CORN-FIELD?

First, they consume plant food. A ton

of pig-weed contains as much phosphoric acid, twice as much nitrogen and five times as much potash as a ton of ordinary barn-yard manure. On the other hand, it is entirely possible to supply in an available form all the fertility that was used by the weeds. Yet, if you did so and allowed the weeds to grow, you would not get nearly as good a crop of corn as you would if you applied no fertilizer and kept the land free of weeds. Hence, weeds must do something else.

Second, weeds shade the ground. They obstruct the sunlight, and hence, perhaps, make the soil cooler. Corn needs plenty of warmth and sunshine. Potatoes, however, are raised successfully when mulched; but who ever heard of a good crop of potatoes in a weedy potato patch. Hence, weeds must do something else.

Third, weeds evaporate large quantities of water. Experiments made in Germany and England show that for each pound of dry substance produced in a growing plant about 300 pounds of water are evaporated or transpired by the plant. Different plants were experimented with, and did not vary greatly in this capacity. The evaporation in a dry climate would be greater than in a humid one, and hence, would probably be greater in this country than in Europe.

I have known corn to increase in one week at the rate of 1,300 pounds of dry matter per acre. This would require the evaporation of 345 tons of water—equal to three inches of rainfall. Weeds growing on the same land would also be pumping water out of the same reservoir and rob corn to the extent of their evaporation.

The yield of corn in a given field is controlled more largely, undoubtedly, by the rainfall than by any other factor.

At the Illinois station, eighteen plats grew the same varieties of corn in 1887 and 1888. Both seasons the seed, the preparation of the seed-bed, the planting and the cultivation were as nearly the same as human ingenuity could devise. The first season the yield of shelled corn was 32 bushels per acre; the second season the yield was 94 bushels per acre. The rainfall during the five growing months, in 1887, was 12.9 inches, while in 1888 it was 22.5 inches.

The average temperature during these months was 73 degrees Fahrenheit in 1887, and 69 degrees Fahrenheit in 1888. Several years of observation has convinced me that as compared with the rainfall, temperature within the usual seasonal variations has little influence upon yield, but mainly affects the maturity.

Sturtevant observed the difference in practice among the vineyardists of New Jersey. Those on the lowlands allow the weeds to grow; on the uplands the soil is kept free of weeds.

The weeds pump the water out of the wet land to the advantage of the grape, which prefers a dry soil.

WHAT DOES STIRRING THE SOIL DO?

First, it increases the plant food of the soil, by causing the air to circulate more freely, and by bringing the particles of soil into different relations one with the other. When a chemist wishes to increase the chemical action between two substances he stirs the compound. Roots not only cannot grow in the absence of oxygen, but oxygen is essential to the micro-organisms, which are all the time making plant food available.

Second, stirring ordinarily makes the soil looser, so that roots may penetrate more readily. Both these things are, doubtless, important; to what extent we are unable to say, but probably much less important than has generally been supposed. If, however, we cultivate the soil deep enough to help in either particular, we necessarily break many roots, and doing so we injure the plant much more than the possible benefit to be derived in stirring the soil, as is shown below.

While connected with the Illinois experiment station, I had the good fortune to conduct a few cultivation experiments, with a view of clearing up some of the obscure points connected with the cultivation of corn. Two or three of these I will relate.

HOW DEEP DO ROOTS GROW?

The first question that arises is, how many roots are actually broken by the ordinary cultivation of corn? Does ordinary cultivation, after all, disturb very many roots? Assuming that the inner shovel of a cultivator would pass within

at least six inches of the center of a hill, the roots of a number of plants were examined and the depth of the roots at six inches from the hill ascertained. Different plants were examined at different stages of the growth during the cultivating season, with the following results:

DEPTH OF ROOTS AT SIX INCHES FROM THE HILL.			
DEPTH BELOW SURFACE.	1888	1889	1890
Less than two inches.....	1	0	6
Two to four inches.....	22	31	114
Over four inches.....	1	17	59
Total	24	48	179

It is evident from this that in the magnificent black prairie loam of central Illinois, with a six-inch seed-bed, at least two thirds of the roots would have been broken by cultivating four inches deep, while cultivating two inches deep would have injured but few of them. This was in a soil that may be said to be twenty inches deep.

Prof. J. S. Newman, with a surface soil a little over nine inches deep, estimates that the position of roots of corn was such that a plow run four inches deep within a foot of the hill would have deprived the plant of more than three fourths of its root surface. This was in Alabama soil.

Prof. W. M. Hays made observations in the soil of central Iowa and in northern Illinois, and Doctors Sturtevant and Gilbert, and Professors Goff and Beckwith made observations in the soil of central New York, which, although along somewhat different lines, showed substantially the same results. The early development of the root system is surprising. I observed one corn plant one half inch high, which had a root eighteen inches long; another three inches high, with a root thirteen inches long; another five inches high, which had roots eleven, twelve, fifteen and eighteen inches long; and another the same height, which had roots twenty and twenty-four inches long.

IS ROOT PRUNING INJURIOUS?

Assuming now that a large number of roots are broken by cultivating four inches deep, the question arises as to whether this mutilation is injurious.

Experiments were made during three seasons on the same tract of prairie loam, there being eight tenth-acre plats on the tract, and every other row on each plat was root-pruned, thus making 144 comparisons each year. The pruning was done six inches from the hill on all four sides, three times during each season, beginning with the first and closing with the last cultivation. In 1888 the roots were pruned to the depth of three inches, while in 1889 and 1890 the pruning was four inches deep.

The following table gives the average yield of air-dry shelled corn per acre on pruned and unpruned portions of the several plats, and the per cent of decrease due to pruning:

EFFECT OF ROOT PRUNING.			
	1888	1889	1890
Pruned.....	88	71.5	58
Unpruned.....	92.5	85	75
Pr. ct. decrease due to pruning	5	16	23

It is noticeable that pruning three inches deep caused very much less injury than pruning four inches; the reason for which is quite evident when we consider the depth at which most of the roots are found.

Prof. Goff root-pruned corn three inches deep twice during the season, in the soil of central New York. The rainfall was abundant. The unpruned portion yielded at the rate of 53 bushels per acre, while the pruned portion yielded at the rate of 32.5 bushels per acre.

Prof. Hays root-pruned several small plats at the Minnesota station in 1889, six inches deep and six inches from the hill. On an average the plats thus root-pruned produced nearly three bushels less of corn and 800 pounds less stover per acre than those on which the roots were undisturbed.

In 1890 Prof. Hays pruned corn in the same way on a more extended scale. Four tenth-acre plats were root-pruned from one to four times, and the four alternate plats were left unpruned. The average yield of the root-pruned plats were thirty-five bushels of corn and one and one third tons of corn stover per acre, while the average of those not pruned was forty-eight bushels of corn and one

and three fifths tons of corn stover per acre.

This is a decrease of seventeen per cent in the stover and twenty-seven per cent in the grain due to root pruning.

In another experiment, pruning five and eight inches from the hill on two sides of it, just as the corn was "laid by," gave a yield of fifty-seven and three fourths bushels per acre, as compared with sixty and one half bushels where the roots were uninjured.

DEEP OR SHALLOW CULTIVATION.

The next question that arises is whether deep cultivation has the same effect as root pruning. Perhaps the benefits to be derived from the stirring of the soil more than counterbalances any injury done the roots.

Is sufficient benefit derived from cultivating two inches deep, as compared with four inches deep to make a change in machinery or methods desirable? Is it practicable?

Eight tenth-acre plats were used in experiments at the Illinois station in the black fertile prairie loam during three years. The treatment of each plat was similar in all particulars except the cultivation. There was considerable variation in the rainfall and temperature of the three seasons. On one plat the soil was not stirred at all, but the weeds were removed by scraping the surface with a sharp hoe. On this plat the surface was flat and hard throughout each season.

Three plats were cultivated shallow with a cultivator of the "Tower" type, and three plats were cultivated about four inches deep with the ordinary four-shovel cultivator of the "John Deere" type.

The following table gives the bushels of air-dry shelled corn per acre:

EFFECT OF DEEP AND SHALLOW CULTIVATION.				
KIND OF CULTIVATION.	1888	1889	1890	Ave.
None—one plat.....	90	77	69	79
Shallow—three plats.....	94	83	68	82
Deep—three plats.....	85	74	63	74
Pr. ct. increase with shallow	11	12	8	10

In only one case in any one three years did a deep cultivated plat yield more than any one of the shallow cultivated plats. The plat which had no cultivation, but had the weeds removed, by scraping with a sharp hoe, yielded more each season than the average of the three deep cultivated plats, and in only two instances, once in 1889 and once in 1890, did any one of the deep cultivated plats yield more than the plat not cultivated.

An increase of ten per cent as found in the experiments, if applied to the annual crop of the United States during the past decade, would mean an increase of one hundred and seventy million bushels of corn annually. Unlike many other proposed improvements in farming, this would be accomplished without any additional cost of production. This increase in production would have enabled the farmers of the United States to donate corn enough to feed all the starving Russians, or according to the usual estimates, of 20,000,000 persons to furnish them eight and one half bushels per person.

Similar experiments to those just given above were also made at the Missouri station in 1889 and 1890. By standard cultivation is meant the ordinary cultivation with the four-shovel cultivator. By deep cultivation is meant cultivating from five to six inches deep with the same cultivator. While the shallow cultivation was with a cultivator of the "Tower" type.

There was an average increase of 25 per cent in the yield of corn with shallow over deep cultivation. In every instance was the yield from deep cultivated plats less than from the standard cultivated plat. In each case was the yield from the standard cultivated plat less than from the shallow cultivated. The plat having no tillage in each case yielded more than those having standard or deep tillage.

The Ohio experiment station made experiments with deep and shallow cultivation in 1889 and 1890. In 1889 a one-horse double-shovel cultivator was used for both the deep and shallow cultivation, and gave results slightly in favor of the deep cultivation. In 1890 a harrow was used for the shallow cultivation, and gave results slightly in favor of the shallow cultivation. The results from the several plats were not at all uniformly in one direction. The ground is described by the exper-

imenters to have been in a very unsatisfactory condition during the whole season.

A large number of experiments have been made at the New York experiment station in different ways, which failed to show any material benefits from cultivating the corn; that is, from stirring the soil. The shallow cultivation gave better results than the deep.

A series of experiments on both corn and cotton have been made at the Alabama experiment station, and almost, if not quite always, show a benefit from shallow over deep cultivation.

EFFECT OF SURFACE CULTIVATION.

Experiment as well as general experience seems to show that surface cultivation gives somewhat better results than no stirring of the soil, although the difference in favor of the stirring is in some cases not very marked.

What effect may surface cultivation have? It is perfectly obvious that if two inches of cut straw is spread upon the surface of the soil the evaporation from the soil will be checked. If the surface of the soil is sheltered from rain but exposed to the sun's rays, and is at the same time kept thoroughly stirred, the stirred portion will become dry, and instead of acting as soil will act as mulch, although not nearly so effectively as the cut straw, as shown notably by the experiments of Prof. Goff. It is simply a question whether the evaporation from the lower soil is checked more than that from the stirred portion is increased. Under the above conditions I have shown that the total evaporation may be checked at the rate of one fourth of an inch of rainfall per week.

When, however, the soil is exposed to the usual atmospheric conditions, the surface mulch tends constantly to take on the functions of soil. Every shower produces this effect, and while the soil is being again stirred and dried so as to act as a mulch, the total evaporation is increased. It is easy to see that the surface mulch or, "dust-blanket," may be converted into soil at night by the precipitation of vapor arising from the warm soil beneath and coming in contact with the colder air at the surface of the ground. I have little doubt but that this is an important factor in many cases.

It is evident, therefore, that whether or not surface tillage conserves the moisture in the soil, must depend on the soil and the atmospheric conditions of the season.

Experiments which I have carried on during the past three years, throughout a considerable portion of the growing season, failed to show any appreciable benefit from the surface tillage in checking the total evaporation of water. Obviously, in a different soil and climate, the results might have been different, but so far as I know it has not been shown to be different in any other soil and climate during a series of years. It is well to insist, moreover, that the amount of evaporation checked by surface tillage, even under favorable conditions, is inconsiderable compared with that which may be caused by the growth of weeds.

There is one important advantage, however, to be derived from a surface tillage over leaving the soil without any tillage. More of the rain which falls upon the surface soaks into the soil and is retained there for the subsequent use of the crop. A mulch of cut straw acts in this way also. I suggest that the reason that Prof. Goff found more water in soil cultivated four inches deep than that cultivated at a less depth was due to the greater collective or "sponge" power of the soil. It is easily possible that under certain conditions the advantage derived in this manner, say when the rainfall is distributed at long intervals in sharp, heavy downpours, may compensate for the injury done by the deep cultivation.

HOW MUCH TILLAGE IS NECESSARY?

The practicable question arises as to how much tillage is necessary to keep the surface receptive to the rainfall. In the experiments above mentioned, which were carried on during three years on tenth-acre plats, there was a deep and a shallow plat, which were cultivated four or five times during each season, and corresponding plats which were cultivated twelve or thirteen times during each season. Another plat was not cultivated at all, as previously explained.

The following gives the result in bushels of shelled corn per acre: Shallow

cultivation, ordinary, 82; frequent, 82. Deep cultivation, ordinary, 73; frequent, 74. No cultivation, 79. There is a point not touched by these experiments and must be left for future determination; namely, whether either deep or frequent cultivation improves or injures the soil in the long run for subsequent crops.

PRACTICAL DEDUCTIONS.

The practical conclusions from this evidence seems to me very simple. We must cultivate to kill weeds. In practice we must stir the ground some in killing the weeds. It is not advisable to cultivate deep nor more frequently than is necessary for the thorough eradication of the weeds. Plant in a fertile, well-prepared seed-bed, making the seed-bed as deep as the character of your soil will permit, and then put in your time fighting weeds, with the least possible disturbance to the corn roots.

THOMAS F. HUNT.

Ohio State University.

SHARE FARMING.

The farmer who said that farming "to shares" would never be satisfactory to both parties in interest till another race of men appeared on the earth, was not far out of the way, assuming that the new race he refers to will be superior to the one now on the stage, or on the farm.

At all events, "farming to shares" is followed so often, or so generally by unpleasant results that it is safe to advise all farmers and all sharers never to undertake it. Probably it would be impossible to find two men, in every way independent of each other, who could or would agree as to the details of carrying on a farm.

The owner of a farm, if his half appears to be small, may attribute the deficiency to the management if the farmer be above suspicion, and he is always above suspicion, of course, when the bargain is made, else he would not be put in possession, although suspicions may arise later.

Then comes the division of the products; this depends upon the contract. If the farmer is to have half, besides what he requires (vegetables, milk, wood) for family use, then, if the product be unsatisfactory, the owner, especially if he be naturally suspicious and "near," may question the amount required for family use.

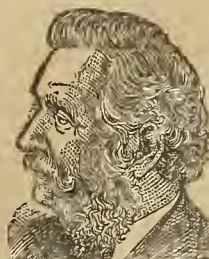
Then comes the division of the product—is it not always a difficult task? Does it not require very accurate book-keeping or a long head to keep account of every product, to cut everything exactly in the middle? If the owner appreciates this, and trusts the farmer, there will be no dissatisfaction. But if he be a hair-splitter, and insist on the exact halving of three eggs, for example, then he will never be satisfied with the "share and share alike" plan, and he ought never to enter into it.

The farmer, the man in possession, has the advantage, and may use it almost unconsciously, perhaps without any intention of overreaching; so that, with all respect to those who cultivate farms on shares, it may be said that the occupant of the farm usually gets the larger part, although this larger part may not be large enough to cause great dissatisfaction on the part of the owner, for it is generally understood that the occupant gathers to his own use many odds and ends and "half-way" pieces that do not come into the general account.

The conclusion has been reached, probably, by the majority of those who have had experience, that farms cannot be cultivated satisfactorily on the share plan. It is far better for the farmer to hire, better for the owner to let outright, the one to take the chances of his own methods and management and make what he can, and the other to take or agree upon a definite rental. Then both will be independent of each other.

Further, it must be said that if a man refuses to hire, but wishes to take on shares, a little suspicion or thought comes, not complimentary to him. If he can do what he says he can, then there is no risk to him in hiring and assuming all responsibility. As to letting a farm with stock and tools on shares (or any other way, some would say), it should never be done. It is impossible to escape serious complications.

GEO. APPLETON.



Mr. S. G. Berry.

Thousands

Of dollars I spent trying to find a cure for Salt Rheum, which I had 13 years. Physicians said they never saw so severe a case. My legs, back and arms were covered by the humor. I began to take HOOD'S SARSAPARILLA, and the flesh became more healthy, the sores soon healed, the scales fell off, I was soon able to give up bandages and crutches, and a happy man I was.

S. G. BERRY, 45 Bradford St., Providence, R. I.

HOOD'S PILLS cure liver ills, constipation, biliousness, jaundice, and sick headache. Try them.

Our Farm.

COMMENTS ON CURRENT WRITINGS.

BY T. GREINER.

CLEAN CULTURE.—Prof. J. B. Smith, of the New Jersey experiment station, mentions, in a recent bulletin, clean culture as an important help in our warfare against insects, and against fungous diseases as well. "Many insects," he says, "remain during the winter in whatever rubbish and shelter they can find in the fields, and many live on the plants for some time after the crop is gathered. It is a safe rule, whenever a crop is gathered, to clear off the remnants and destroy them as completely as possible. This is contrary to the general practice, which is to get the crop and let the remnants take care of themselves until the land is prepared for something else. Melon, citron, squash, cucumber and other similar vines are simply left in the fields after the crop is gathered, and there many a borer and many a striped beetle comes to maturity long after the farmer is done with the plants. The rule should be to gather and burn, either by fire or in the manure pit with lime. In orchards, this recommendation is of especial importance. In dead wood, on the tree or on the ground, many species hide and complete their development during the winter. Every dead branch and twig should be cut, and with the other rubbish hauled out and burnt. The ashes will make a good fertilizer.

"Rubbish is never a source of advantage, and may be the exact contrary in many instances. Loose bark does not help a tree much, while it does afford shelter to many hibernating insects. Never leave an old wood-pile in or near an orchard, especially if the wood is the same kind as the orchard trees. Many insects breed preferably in dead wood, but when it becomes too dry or rotten they have an instinct that enables them to discover a weak or sickly tree and they attack this at once and ruin it, when otherwise it might have recovered. Fallen fruit should always be destroyed. Were this systematically done there would soon be no further complaint of curculio, and less of codling-moth. The fruit should be fed to hogs, buried deeply, burned with quicklime, or in some other way that will prevent its maturing the insect in it. Field and orchard should contain, as nearly as possible, nothing save the crop, and when no crop is on the ground there should be nothing else; certainly neither rubbish nor remnants."

All this is good doctrine and safe to put into practice; nay, indispensable for best success. We can go still further. The weeds that we leave among cultivated crops, the wild shrubs and vines and trees left in fence corners and hedge rows, etc., all are liable to carry infection of insects and diseases from plant to plant, from tree to tree, and from year to year. Rusts and scabs that bother or even destroy our cultivated crops, often live and propagate on wild plants and trees. Scab may be propagated on thorns and cedars, and thrive and flourish in neglected hedges while we try to fight it in our orchards. The black knot grows unmolested on wild plum and cherry trees, and keeps up the infection, while we try to stamp it out by cutting the diseased branches out of our cultivated cherry and plum trees. The spores of celery, tomato and potato diseases live and multiply on many of our weeds, and all our efforts in doctoring our plants must remain partially ineffective so long as we allow the weeds to disseminate these diseases afresh. We may fight lice on our hops, and yet give them a fine chance to multiply a million-fold on the wild plums just over the fence.

In order to have full success in our warfare against insects and diseases, we must give them no quarter, no chance to feed and breed on weeds and wild shrubs and trees. Clean cultivation is the great requisite of success. We don't want neglected fence rows and old hedges and wild stuff of any kind in close vicinity to our cultivated crops. Clean cultivation alone can give us entire and permanent relief, but I fear it will be a great while yet before this is universally recognized and practiced.

Farm and Fireside Directory

OF

FARM IMPLEMENTS, MACHINERY, ETC.

This Directory will be found very useful to those who want any kind of farm implements, machinery or vehicles, and our readers will find it to their interest to write to the firms named for catalogues and information before deciding what to buy.

Always mention the Directory when writing to those whose names appear in it, for Farm and Fireside subscribers will secure special attention from them.

We aim to give in this Directory the addresses of reliable manufacturers and dealers in articles that are wanted by farmers and country people. All of these firms are well known to us, and we do business with many of them. So great is our confidence in them that we guarantee to return to our subscribers any money that may be lost by trusting any one whose name appears in this Directory, who turns out to be a deliberate swindler. This offer is to actual subscribers only, and is a positive guarantee to make good any loss occasioned by swindlers.

BALING PRESSES.

Whitman Agricultural Co., St. Louis, Mo.

BARB WIRE.

Buck Thorn Fence Co., Trenton, N. J.

BINDERS, REAPERS AND MOWERS.

William Deering & Co., Chicago, Ill.
Johnston Harvester Co., Batavia, N. Y.

BUGGIES AND CARRIAGES.

The Anderson & Harris Carriage Co., Elmwood Place, O.
Studebaker Bros. Mfg. Co., South Bend, Ind.

CORN PLANTERS.

Keystone Mfg. Co., Sterling, Ill.

CREAMERY, BUTTER, CHEESE, DAIRY MACHINERY, CENTRIFUGAL CREAM SEPARATORS, ETC.

Flint Cabinet Creamery Co., Flint, Mich.
D. H. Burrell & Co., Little Falls, N. Y.
Davis & Rankin Bldg and Manufg Co., Chicago, Ill.
P. M. Sharples, West Chester, Pa.
Vermont Farm Machine Co., Bellows Falls, Vt.

ENGINES.

Armstrong Bros., Springfield, Ohio.
The Huber Manufacturing Co., Marion, Ohio.

EVAPORATORS.

Blymyer Iron Works Co., Cincinnati, Ohio.

EVAPORATORS FOR MAPLE AND SORGHUM.

The G. H. Grimm Mfg. Co., Rutland, Vt. & Hudson, O.
Warren Evaporator Works, Warren, Ohio.

FARM WAGONS.

South Bend Wagon Co., South Bend, Ind.

FERTILIZERS.

Baugh & Sons Co., Philadelphia, Pa.

FENCE MACHINES.

Richmond Check Rower Co., Richmond, Ind.
Lausug Wheelbarrow Co., Lansing, Mich.

GANG AND SULKY PLOWS.

Deere & Co., Moline, Ill.

GARDEN IMPLEMENTS.

S. L. Allen & Co., Philadelphia, Pa.

GRAIN DRILLS, ETC.

The Farmers Friend Mfg. Co., Dayton, Ohio.
P. P. Mast & Co., Springfield, Ohio.
Bickford & Huffmau, Macedon, N. Y.

HARNESS.

Elkhart Carriage and Harness Co., Elkhart, Ind.

HARROWS.

Gale Manufacturing Co., Albion, Mich.
Hench & Dromgold, York, Pa.
D. S. Morgan & Co., Brockport, N. Y.

EXTRACTS FROM CORRESPONDENCE.

FROM OREGON.—One of my neighbors gathered 160 gallons of strawberries in the latter part of last November; it was a second crop. He could have gathered much more had it not been for the rain. W. P. Aumsville, Oregon.

FROM ILLINOIS.—Henry county is situated in the northwestern part of the state; it is one of the best counties in Illinois. Cambridge, the county-seat, is a beautiful, thriving city; the population is about 1,000. Our climate is mild, both winter and summer. The soil is rich, and good for corn, wheat, oats, barley, etc. Land varies in price from \$10 to \$50 an acre. The fruit product was very good last season, and prices fair. E. C. L. Geneseo, Ill.

FROM GEORGIA.—Fayette county land is characteristic of Georgia lands generally. With the exception of lands that were cleared and cultivated many years before the emancipation of the negroes, the land is very productive. It is slightly rolling, with an abundant supply of water. The wheat and oat crops promise to be good. Corn is being cultivated more largely than ever before. The low price of cotton has not depreciated the value of lands. Improved farms can be bought for from \$15 to \$30 per acre, and unimproved lands from \$10 to \$15. Town property is steadily increasing in value every year. Horses and cattle are in great demand. Good farm mules are worth from \$125 to \$200; milch cows from \$15 to \$75. Cotton, the great staple of farm products in Georgia, is, we believe, under the present crisis of money matters, detrimental to the country's best interests, because farmers are hinging all their hopes in it; consequently, farms are being sold to settle executions against them, brought on by excessive use of fertilizers and the enormous acreage devoted to the culture of cotton. This is a goodly country, but the farmers are not in possession of the right

HAY RAKES.

The Long & Allstatter Co., Hamilton, Ohio.
Stoddard Manufacturing Co., Dayton, Ohio.

HAY TOOLS AND MACHINERY.

Ohorn Bros., Marion, Ohio.

HORSE POWERS.

S. S. Messenger, Tatamy, Pa.

IRON FENCING.

Hartman Manufacturing Co., Beaver Falls, Pa.

LAWN MOWERS.

Chadborn & Caldwell Mfg. Co., Newburgh, N. Y.

MANURE SPREADERS.

Kemp & Burpee, Syracuse, N. Y.

MILLS FOR GRINDING CORN, WHEAT, ETC.

Nordyke, Harmon & Co., Indianapolis, Ind.

PLOWS.

Economist Plow Co., South Bend, Ind.
The Bucher & Gibbs Plow Co., Canton, Ohio.
Oliver Chilled Plow Works, South Bend, Ind.
Princess Plow Co., Canton, Ohio.

POTATO DIGGERS.

Hoover & Prout, Avery, Ohio.
Pruyn Potato Digger Co., Hoosick Falls, N. Y.

POTATO PLANTERS.

Aspinwall Manufacturing Co., Three Rivers, Mich.

ROAD MACHINES.

F. C. Austin Mfg. Co., Chicago, Ill.
American Road Machine Co., Kennett Square, Pa.

ROOFING.

Kanneberg Roofing Co., Canton, Ohio.

SCALES.

Osgood & Thompson, Binghamton, N. Y.

SPADING HARROWS.

Bryan Plow Co., Bryan, Ohio.

SPRAYING MACHINES.

P. C. Lewis, Catskill, N. Y.

THRESHING MACHINERY.

Minard Harder, Cobleskill, New York.
The O. S. Kelly Co., Springfield, Ohio.
Kingsland & Douglas Mfg. Co., St. Louis, Missouri.
Novelty Iron Works, Dubuque, Iowa.
St. Louis Well Machine & Tool Co., St. Louis, Mo.
The American Well Works, Aurora, Illinois.
Williams Bros., Ithaca, N. Y.

WELL DRILLING AND PUMPING MACHINERY AND TOOLS.

The Springfield Machine Co., Springfield, Ohio.
Perkins Wind Mill Co., Mishawaka, Ind.
U. S. Wind Engine and Pump Co., Batavia, Ill.
Aermotor Co., Chicago, Ill.
Stover Manufacturing Co., Freeport, Ill.

WINDMILLS.

The Springfield Machine Co., Springfield, Ohio.
Perkins Wind Mill Co., Mishawaka, Ind.
U. S. Wind Engine and Pump Co., Batavia, Ill.
Aermotor Co., Chicago, Ill.
Stover Manufacturing Co., Freeport, Ill.

WIRE FENCE.

Sedgwick Bros. Co., Richmond, Ind.

WOOD FORCE PUMPS.

C. G. Blatchly, Philadelphia, Pa.

ton. Cows, from \$25 to \$35; yearlings, \$14 to \$18; steers, heifers, \$10 to \$12, two-year-old steers, \$20 to \$25; three-year-old steers, \$35 to \$40; horses, \$85 to \$125. We have a healthful climate, plenty of churches, good schools and good people. We need more people that have more push in them, and get our farms here better improved. G. P. A. W. Clarence, Mo.

FROM WEST VIRGINIA.—Marion county is steadily growing in population, wealth and prosperity. She is fast coming to the front, and it will not be long before she will be the manufacturing center of the state. Marion county was organized January 14, 1842—over fifty years ago—from a portion of Harrison and Monongalia counties, and was named after Gen. Francis Marion, the Revolutionary hero. Population, 20,721. The assessed value of real and personal property at the assessment of 1890 was \$6,724,846; the county levy is 45 cents on \$100. The number of cattle produced in 1890 was 12,693; horses and mules, 4,924; sheep and hogs, over 20,000 head, with an intrinsic value of over \$1,000,000. The hills are high, but as a rule they are not so steep as to prevent plowing, and they yield good crops. Cyclones, blizzards and everything in that line are unknown. Crops are almost a sure thing when they are cultivated right. The county is rich in minerals. Coal, flint, fire-clay, iron ores, potter's clay, and sandstone for building purposes are found nearly all over the county. Superior sands for glass-making abound. Oil is found by boring from 1,700 to 2,500 feet, and is of a superior quality. It is said that the county contains over two hundred producing oil-wells. H. T. H. Grangeville, W. Va.

FROM ILLINOIS.—The soil of Vermilion county is a rich, black loam, yielding abundant crops of all cereals common to this latitude. Farmers here are mostly contented with their lot. We have good railroad facilities, good markets and a good school system. Corn is worth 42 cents, oats, 30 cents, wheat, 80 cents per bushel; hogs, \$4.25, live beef cattle, \$2.50 a hundred weight; butter, 20 to 25 cents a pound; eggs, 15 cents a dozen; hay, \$8 to \$10 a ton. We have a mammoth concern packing sugar-corn, peas and pumpkins, which was established in 1878, and is one of the largest of its kind in the United States. The output is over 2,500,000 cans of corn and over 700,000 cans of peas. The factory covers over two acres and employs from 300 to 500 hands during the canning season. The company raises its own corn and peas to a large extent, and will plant over 1,800 acres of corn and from 450 to 500 acres of peas this season; they are now arranging to put in a silo to make ensilage for their offal for cattle feed, that will hold 2,400 tons—sufficient feed for 400 head of cattle. The same also owns the electric light plant lighting the city, having now over 1,100 lamps. Another company manufactures overalls, jackets, working shirts, jeans pants, sleeve vests. It employs from 80 to 100 hands, using 72 machines and cutting over 1,200 yards of cloth every ten hours. Their output is about 180,000 garments annually. A. J. McW. Hoopston, Ill.

FROM CALIFORNIA.—In your issue of May 15th I saw an article from Woodland for the benefit of the working-men, which would not be a fair representation of facts if written from here. California is a big state, and he who writes of part of it may miss the description of another part very much. I have spent nearly ten years in Tulare and Fresno counties, much of the time working for wages. A farm-hand usually furnishes his bed, and frequently, but not always, sleeps in a dwelling. I prefer to furnish my own bed; I would rather sleep in a good outhouse where the weather is very cold at 28° above zero than in many eastern dwellings at 20° or more below zero. I have slept for months in summer on a hay-stack, when I was welcome in the house, for the stack was the pleasanter place. Many hands work all the year, with very little loss of time, as we have little rain here. Large ranches employ several men all the time, and one or two can get steady work on smaller ones. Your Woodland correspondent says nothing of a long term with the thresher at from \$2 to \$6 per day. "There is no society for the laboring man of California." I deny. I only know of one home where wage-workers are unwelcome. In the church, the Sabbath-school, the dance, the Alliance, you will find the laboring man always respected, and frequently in the lead. If a man is doing well where he is, I would advise him to stay right there. Now, I will speak of one thing which exists here as well as in some places in the "states," and which H. M. H. did not mention. A man without money and "no visible means of support" is liable to arrest and imprisonment as a vagrant. W. A. H. G. Last, Fresno county, Cal.

Many a woman blesses the day when she was induced to try the new way of washing clothes as recommended on page 13, which is not only a wonderful help to those who are at housekeeping, but also invaluable to persons who board, as stockings, handkerchiefs, silk and other underclothing, lace collars and similar pieces, can be washed in a wash-basin and made as clean, sweet and white as if done up at a first-class laundry. The publishers of this paper make an offer on page 13 by which you can get enough soap for trial, without any cost whatever.

Our Farm.

HOME GARDEN NOTES.

BY JOSEPH.

DRILLS AND CULTIVATORS.—A garden seed-drill is a pretty good thing to have when you wish to sow a rather large patch of onions, beets, spinach, carrots, or of almost any other kind of garden seed. The home gardener, however, who has only a quarter of an acre or so of land to plant to the various kinds of vegetables, and who plants only to supply the wants of his own family, even in greatest abundance, has little use for the drill. Even if he grows an occasional larger patch of beets or any other kind of vegetables, he can easily dispense with it.

Village gardeners who keep a cow, often desire to raise one eighth of an acre or so of mangel beets or carrots. It is a good practice, too. But, with the soil properly prepared, I would just as soon plant by hand as to go across the street to borrow the best seed-drill. Just mark off the ground in rows of proper distance; then take a basin containing the seed in the left hand, and with the right hand drop a few seeds in a place, say every twelve inches apart for mangel beets, or ten inches apart for sugar beets, and at proportionate distances for other vegetables; next push a little soil over the seed with the foot, and finally step upon the place, and then continue in the same way until the piece is finished. It is quick work and just as easy and convenient and sure as planting corn. Besides, you have this advantage, that the plants come up at just the right distance and each hill only needs thinning to one plant. If you sow with the drill the plants are all in one continuous row, and in hoeing and thinning you hardly know what plant to take out and what to leave.

In short, my method makes the after-culture much easier. We always dread the thinning process, when plants stand thickly in a continuous row; and all persons are more or less afraid of slashing into the rows and cutting out "those fine plants." And, consequently, this is seldom done so thoroughly and so promptly as is necessary for the good of the crop.

Turnips, cabbage, cauliflower, kale, etc., all can be planted after this same fashion, and I don't know but what it would be well to sow lettuce in a similar way also, dropping a pinch of seed every four or six inches in the row, afterwards thinning to one plant in a place, letting them get some size and then beginning to use by taking out every other plant and leaving the alternate one to form fully-developed heads.

But while we thus care little about the seed-drill, we will find the wheel-hoe indispensable. Where we have only one, which is all that the home gardener needs, I think that the Planet Jr. double wheel-hoe will give best satisfaction. Even in a pretty small garden it will soon pay for itself. It is tedious work to loosen up the soil and kill the weeds between close-planted vegetables with a hand hoe. It takes too much time to go over the ground, especially if it has to be done as often as it should be. The soil should be kept loose on top. With the wheel-hoe we can run over quite a patch in a few minutes, and if it rains the next day, packing the soil again, we can run over the patch once more after it has become dry enough. It is more fun than work to do this, even for a small boy. In short, the possession of one of these wheel-hoes will almost insure good cultivation, freedom from weeds, and, consequently, a good crop of vegetables. Of course, there are other wheel-hoes that can be used with good effect; but if I were to buy a new one, I think it would be a Planet Jr.

CUCUMBERS BLOOMING BUT NOT FRUITING.—A reader from West Virginia says the reason that cucumbers bloom but do not bear is that they were planted at a time when the sign in the zodiac was in the flower. No, no, my friends! Don't lay it on to the zodiac. The trouble might have been in the variety or strain. Some plants have the natural tendency to produce mostly male flowers. But usually, if you plant good seed of our ordinary sorts, and give them room enough and good ground, they will bear freely.

Bugs and other insects are also needed to carry the pollen from the male flowers

to the fruit blossoms, and without them the vines would possibly remain fruitless. Should vines be tardy in setting fruit, try pinching off the ends of the main runners, thus forcing out laterals, on which the fruit is borne.

CABBAGE-WORMS AND SQUASH-BUGS.—A reader gives the following remedy for the cabbage-worm: "Sift air-slaked lime over the plants. If this is done when the worms first make their appearance, they will be immediately destroyed and the cabbages will make a surprising growth."

In late years I have had very little trouble with cabbage-worms. Going over the patch once or twice during the season, dusting a little buhach (California-grown insect-powder) on each plant, has always given a quietus to the worms and given me good heads free from the disgusting creatures. But there are many other things that could be used with good effect. I doubt, however, whether *air-slaked* lime would be as effective as desirable. Better use *dry-slaked* lime. Take fresh-burnt lime and slake it with just water enough so it will pulverize. This is very caustic and will destroy all soft-bodied worms and slugs with which it comes in contact. It may be a good remedy for potato-slugs, currant-worms and many other things. It also kills angle-worms in the soil.

For worms on plants, sift it on the plants when they are wet with dew, and for angle-worms, maggots on the roots of plants, etc., pour it upon the soil in solution (with water or liquid manure). Tobacco dust is also a good insect remedy.

A reader recommends saltpeter, a tablespoonful in two gallons of water, to be poured about the roots of each hill of vines, as a remedy for the squash-bug. It is a good thing, yet I find tobacco dust, clear or mixed with equal bulk of bone-meal, and applied *thickly* around the plants, a pretty sure cure for bugs and a good fertilizer for the plants.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

AMOUNT OF COPPER ON SPRAYED FRUIT.

Last December *The Pall Mall Gazette*, of London, England, published an article headed, "American Apples—Alarming Allegations—Are They Doctored with Arsenic." Then the statement was made "that American orchardists used arsenic in such large quantities to protect their fruit from insects as to completely saturate it, and that the bloom or white powder found on American apples is arsenic, brought to the surface by evaporation, and if eaten this should be wiped off to avoid injurious effects. That the delicate and unnatural (?) bloom of American apples is due to arsenic, a drug that is largely used by people, especially the fair sex, in America, to make the complexion fair." During last autumn the board of health of New York city condemned several car-loads of grapes as dangerous to public health, because slightly discolored with Bordeaux mixture.

In the case of the *Pall Mall Gazette* the statements were undoubtedly made by speculators for the purpose of injuring the sale of American apples in the English market. In the case of the condemnation of the grapes by the New York board of health, the injury to grape growers was due to ignorance on the part of the board, and is not liable to be repeated. However, it is a warning to all growers of fruit, to be careful how they use Bordeaux mixture late in the season, for fruit with this material adhering to it, however slightly, is always sold at a discount from prices for clean fruit. Bordeaux mixture is probably the best material to use for a fungicide early in the season, but late in the season the carbonate of copper solution is much the best to use.

Some analyses have been made at the Massachusetts experiment station to determine the amount of poison on grapes very much discolored with Bordeaux mixture, and they showed in one case that the fruit contained only two one thousandths of one per cent of oxide of copper, an amount so small that one would need to eat from one half to one ton of such grapes, stems, skins and all, to obtain the least injurious effect, and this, notwithstanding the fact that the bunches tested were selected from those having the largest amount of the copper mixture adhering to them.

Another analyses made to determine the amount of poison adhering to the surface of apples (for it could not be absorbed into the substance of the fruit) which had been sprayed three times with Bordeaux mixture and Paris green, showed of copper oxide fourteen ten thousandths (.0014) of one grain. The specimens selected were those most discolored. Or, in other words, it would take two thousand barrels to yield one ounce of copper oxide. No arsenic whatever could be found. It had all washed away, as it was not used after July 1st, and the tests were made October 1st.

When we consider the fact that probably not one fruit grower in one hundred throughout the country used Paris green at all, and not one barrel in a thousand came from sprayed trees, the absurdity of the scare is still more apparent.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Grafting the Wild Plum.—A. T. S., Lexington, Ohio. The native wild plum is one of the very best stocks for the cultivated kinds, and may be grafted early in the spring or budded in August, as is most convenient. Probably you will have the greatest success from budding them. For directions for budding see FARM AND FIRESIDE for June.

Figs Drooping.—C. S. M., Pomona, Florida, writes: "Why is it my fig-tree drops its fruit when the little figs are only half grown?"

REPLY:—Your figs probably fall from some climatic trouble, such as too much warm, moist weather, unsuitable soil, etc., or else from some weakness in the variety, which makes it poorly adapted to your conditions. The same trouble is found in California with some varieties, while others near by produce abundantly.

Apple Grafted on Wild Crab.—Mrs. B. B., Langworthy, Iowa, writes us that she has successfully grafted the Morrison apple on the native wild crab of that state. This wild crab has frequently been tried as a stock for the common apple, but the results have not generally been satisfactory. The wood of the wild crab has a closer grain, is much harder, and grows slower than that of our common apple, so that they do not unite well, although the grafts may grow for several years, and even fruit, yet the union is a short-lived one. The more nearly related the stock is to the scion in any case of grafting, the greater the chances of success.

Scale on Apple-trees.—C. M. W., Fort Jones, Cal. The apple twig which you sent is infested with a scale called pernicious scale (*Aspidiotus perniciosus*). It is injurious to several deciduous trees. The scales are of a grayish color, except the center, which is pale yellow or reddish. They are circular, flat and about one twelfth of an inch in diameter. For a summer remedy the trees should be sprayed with the following compound: Whale-oil soap (80 per cent strength), twenty pounds; sulphur, three pounds; caustic soda (98 per cent pure soda), one pound; commercial potash, one pound; water to make one hundred gallons. Place sulphur, caustic soda and potash together in about two gallons of water, boil for at least one hour or until thoroughly dissolved. Dissolve soap by boiling in water; mix the two solutions and boil for a short time. Use the solution as hot as possible. For a winter wash, the following is effective: Resin, thirty pounds; caustic soda (70 per cent), nine pounds; fish-oil, four and a half pints; water to make one hundred gallons. Cook thoroughly for at least three hours the resin, caustic soda and fish-oil in a large boiler, together with twenty gallons of water; then add a little hot water occasionally until you have at least fifty gallons of the hot solution. Place this in the spray tank and add cold water to make the necessary amount. Never add cold water when cooking.

Cranberry Culture.—P. B., Chicago, Ill. The subject of the cultivation of cranberries is one that has much detail connected with it, and any one who intends to go into it as a business should carefully study the literature on the subject, and if possible visit and talk with some practical cranberry grower. But a few general principles may be laid down. All swamps do not seem equally agreeable to the cranberry plant, but wherever

wild plants grow thriftily there can be no doubt of the adaptability of the land for this purpose. As a rule but few bogs pay for much labor expended on them, unless the drainage and flowage is completely controlled at all times of the year. As an instance showing the futility of spending money on a cranberry bog where the flowage cannot be controlled, I call to mind a certain cranberry bog in Wisconsin, on which a large amount of money was expended in draining and other improvements. It bore several good crops, but one very dry season the bog got afire and burned for several months, reducing most of it to an ash bed. If flowage is controlled it may also be used as a means to check insect depredations, keep the proper amount of moisture in the soil for the healthy growth of the crop, and to protect from early frosts in autumn. Occasionally it will pay to plant cranberries on bogs where the flowage cannot be controlled, but this is only the case when the bog can be planted with but little expenditure of money, for the crop is too uncertain in such places. In preparing a cranberry bog, the surface should be divided into beds, with open ditches. These beds should have an even slope to carry the water off into the ditches quickly. If the surface of the bog is firm it may be plowed, but if too soft to plow, it is customary to skin off the turf and roots from the surface. When the water level can be raised so as to cover the bog, it is often advisable to do so until all vegetation is killed, which will save much work in killing weeds. After the beds are made they should be covered with three or four inches of sand, in which the vines should be planted. This sand should not be surface sand, but sand from some pit where it will be free from weed seeds. In setting cranberry-vines from wild bogs, care must be taken to avoid setting plants that do not produce fruit. Occasionally such barren plants are found in large quantities. Among the good books on the subject may be mentioned "Cape Cod Cranberries," for sale by the Orange Judd Company, New York City, N. Y.

EVERY MOTHER

Should Have It In The House.

Dropped on Sugar, Children Love to take JOHNSON'S ANODYNE LINIMENT for Croup, Colds, Sore Throat, Tonsillitis, Cough, Cramps and Pains. Relieves Summer Complaints, Cuts and Bruises like magic.

UNLIKE ANY OTHER For Internal and External Use.

JOHNSON'S Anodyne Liniment.

ORIGINATED IN 1810. Soothing, Healing, Penetrating

Stops Pain, Cramps, Inflammation in body or limb, like magic. Cures Croup, Asthma, Colds, Catarrh, Cholera, Morbus, Diarrhoea, Rheumatism, Neuralgia, Lamé back, Stiff Joints and Strains. Illustrated Book free. Price post-paid, 35 cts. I. S. JOHNSON & CO., Boston, Mass.

PURE-BRED SHEEP.

Lincoln, Hampshire, Shropshire and South-down. Now is the time to have your order booked for fall shipments. Send a 2-cent stamp for circular and prices. EDWARD WALTER, West Chester, Pa. Ready for immediate shipment, 11 Registered Jersey Calves, 2 to 7 mos. old; also Chester White and Berkshire Pigs, 2 to 6 mos. old, and three pairs Scotch Collie Pups. COME SEE MY STOCK & SELECT FOR YOURSELF. Mention this paper when you write.

THE GRANGER Evaporator

Fruit & Vegetable For family use and small fruit growers. The Best and Cheapest in the market. Price \$3.50, \$6 and \$10. Circulars free. EASTERN MFG. CO., 257 S. 5th St., Phila., Pa. Mention this paper when you write.

CIDER MACHINERY. POWER SCREW HYDRAULIC OR KNUCKLE JOINT PRESS. Graters, Elevators, Etc. Boomer & Boschert Press Co. 99 W. Water St., Syracuse, N. Y.

Have You CONSUMPTION?

Catarrh? Bronchitis? Asthma? All Diseases of Nose, Throat and Lungs (except last stages of Consumption) surely cured by the New **ANDERSON'S** Broomer. Not a Drug, but a New Scientific Method of Home Treatment. Cures Guaranteed. Sent FREE to all who apply. Try it FREE, and pay if satisfied. State age and particulars of disease. Address, NEW MEDICAL ADVANCE, 62 E. 4th St., Cincinnati, O.

BICYCLES GIVEN AWAY For a few hours active labor. Send 25c. for "The Modern Queen," 16 pages, 64 column illus. Magazine, 6 mos. on trial and full particulars. Modern Queen Co., 106 Center St., New Haven, Ct.

Don't get a new wash-boiler; don't even get the old boiler mended, but next wash-day try the easy way of washing clothes with Frank Siddall's soap. See our offer of a free trial package on page 13.

BUCKEYE LOW DOWN HOE Combined GRAIN AND FERTILIZER DRILL

The original and only Glass Fertilizer Distributor. Center Gear, Ratchet Ground Wheels, Positive Force Feed for Grain and Grass Seed and Fertilizer Limber Tongue, with no weight on the Horses' Necks. Frame supported by Wheels both in Front and Rear, practically a Four Wheel Drill. The Ratchet Ground Wheels both being Drivers, the Grain and Fertilizer Feeds are operated in turning either to the Right or Left—the latest and best improvement on Grain Drills now in the market. Also Manufacturers of Buckeye Grain Drills, Buckeye Riding and Walking Cultivators, Buckeye Seeders, Buckeye Cider Mills and Hay Rakes. BRANCH HOUSES: Philadelphia, Pa.; Peoria, Ill.; St. Paul, Minn.; Kansas City, Mo.; San Francisco, Cal. Send for Circular to either of the above firms or to P. P. MAST & CO. SPRINGFIELD, OHIO.

Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hamamonton, New Jersey.

ABOUT GAPES.

Although we have frequently alluded to this trouble, yet our readers are making further inquiries. They wish to know the cause of gapes and its cure. The gapes is caused by the windpipe being clogged with a large number of minute, thread-like worms, the chicks suffocating from the air passages being closed. It is difficult to dislodge them with remedies, as any severe remedy for destroying the gapes also destroys the chick. Gapes are due to damp, filthy ground, and prevails mostly on old farms, the best preventive being a free use of air-slaked lime.

When a chick has the gapes, give it a drop of spirits of turpentine on a bread crumb, and if no relief results, the worms must be removed by stripping a small feather, leaving a tuft at the end (or a straw may be used), and inserting it in the windpipe, giving it a quick twist, withdrawing it quickly also, and the worms will be drawn out. If the feather is dipped in coal-oil, and well shaken out before inserting, it will be an advantage. Feed the chicks on clean boards and spade up the runs, freely scattering air-slaked lime over every portion of the ground.

PRESERVING GREEN FOOD FOR WINTER.

How to preserve green food is no longer a problem. Use grass, clover, corn fodder (the blades only), cabbage, turnip tops, beet leaves or any green material that the hens will accept, but use only such substances as are fully matured, but not dry; that is, do not use materials that have seeded, but only such as are in the milky stage, or just when the seeds are about to form. Cut all the material fine, half-inch lengths, and pack it in a barrel, hoghead or box that is tight and strong enough to resist pressure. Have a loose top that will drop down to the bottom of the barrel or whatever receptacle may be used, but which nearly fits in the top, only it must not be too tight to go into the barrel. Place this head on the green material, and put a few heavy stones on the head, so as to give pressure on the materials, which will exclude the air. More green food can be added as the contents press down. The food will keep a year, and can be used from time to time as required, replacing the covering as often as a portion of the contents are removed.

TREATMENT OF SITTERS.

As some hens will hatch out full broods and others fail to bring off but very few, at this season of the year the chicks may all be given to one hen, and the extra hen then broken up from sitting, instead of compelling her to hatch out another sitting of eggs, as is sometimes done by those addicted to cruelty. If a hen goes on the nest and remains there three weeks, she will be brought to a condition most favorable to laying, and all that is necessary is to give her liberty on the range, with an allowance of an ounce of fresh, lean meat daily, and she will not only soon begin to lay, but will lay a large number of eggs before she will attempt to sit again. It is always best to let a sitting hen go on the nest and remain two weeks or more, as it is to her advantage, being nature's method of equalizing the forces at work and of getting her in a proper condition. A sitting hen should never be broken up until she has reduced herself in flesh.

POULTRY IN MINNESOTA.

This spring has been very bad for poultry of all kinds. We have not had so much rainy weather for ten years. We got a freeze-up and a snow-storm as late as May twentieth. On account of this bad weather the farmers have had but poor luck with their young chickens. Some have not been able to raise any. The prices paid for eggs, however, are very good.

I have seen a good deal in FARM AND FIRESIDE about the excellent qualities of the Leghorn for crossing, so this spring I purchased a pure-bred Brown Leghorn male, and allowed him to run with my common hens. I am more than pleased with the result, as the increase in the egg yield has paid for him many times.

Amiret, Minn.

P. G. E.

A POINT ON WHEN TO SELL.

One class of our citizens, the Hebrews, buy largely at certain times. Many poultry retailers are among them, and their religious rules and regulations have much to do with fixing the market prices in the large cities. They usually have about thirty-five various feast and fast days in a year, requiring about forty-eight days of celebration. They usually have certain dates, which can be obtained from the "Jewish calendar" of the almanacs published (nearly all almanacs contain the feast days), and it will pay to know when these days occur. The consumption of poultry at some of these feasts is a great feature, and as their regulations require that all poultry be killed by a church official, they buy only live fowls. They are the largest purchasers of geese and ducks, and are willing to pay good prices for choice birds. It may also be stated here that if those who sell poultry will make themselves familiar with all holidays and with all sects, it will be an advantage in knowing the best periods for shipping.

FOWLS IN CONFINEMENT.

Many persons keep fowls in confinement for want of space, and much better management must be given in order to avoid disease and an overfat condition. If the flock is small, the table scraps should be made to answer for any extra allowance, the principal food being chopped grass or some bulky material. One of the essential requisites is not to permit the hens to be idle, but compel them to scratch and work. It is much better to have them hungry and eager to scratch for something than to overfeed them, and thereby destroy their value as egg producers.

KEEPING DUCKS.

At this season of the year the ducks should never be fed. It is an advantage to them to be compelled to forage for all they receive. Ducks may be kept in confinement when young, but an adult flock makes a disagreeable mass of mud and stench when penned up. It matters not if they have water to swim in, but they will require a range, upon which they will work industriously. Drinking water should be convenient, and plenty of it should be supplied.

MANAGEMENT OF MOULTING HENS.

Moulting hens will be noticed this month, and also until late in the year, if slow in beginning to shed their feathers. They need dry quarters at night and protection from rains during the day, as they will easily take cold in such a condition. A teaspoonful of tincture of iron in the drinking water will serve as an invigorator, and the food should be of a variety and nourishing. Milk may be given freely to moulting hens.

INQUIRIES ANSWERED.

Can Hens Swim?—C. H., Keosauqua, Iowa. A fowl can float on the water, but has very little power of locomotion, swimming but very little, remaining almost stationary.

Pounded Crockery.—J. S. R., Sparges, Texas, writes: "Should crockery or china ware be broken very fine, or coarsely, and should they eat all they wish?"

REPLY:—It should be pounded to pieces about the size of wheat. The fowls will only eat the quantity required. It is harmless to them, serving as grit to grind the food.

Glass in Poultry-house.—T. M. S., Drum's, Pa., writes: "Will three windows, each 4x6 feet, be too much glass for a poultry-house 10x30 feet, the windows to be placed on the south side?"

REPLY:—As fowls are very partial to plenty of light, the windows are not too large, and will also render the house comfortable during the winter.

Hens not Laying.—E. S., Dayton, Ohio, writes: "My hens are in excellent condition, are fed three times a day on a variety, and are well cared for; yet they do not lay. They are a cross between Plymouth Rock and Light Brahma."

REPLY:—The cause is due to overfeeding, and the hens are very fat, something which always results when a flock is fed three times a day, especially in the warm season.

Chicks—Canary-bird.—Mrs. J. S., Sulphur Creek, Cal., writes: "What ails my chicks? Every now and then I lose one by choking. What causes my canary-bird to pick and eat the pin-feathers from her young ones? I feed her on seeds, boiled eggs and sometimes raw meat. What is the cause of enlarged liver in fowls?"

REPLY:—For remedy for gapes, see reply to M. J. K., this column. The canary has a vice that is difficult to cure. Try the use of fine bone, fresh from the butcher, and give a small pinch of sulphur three times a week in the food, as well as season with a little salt. Enlarged liver is due to overfeeding.

Gapes in Chicks.—M. J. K. writes: "What remedy will answer for gapes? First symptom is sleepy action; second, sneezing; and third, they begin to sneeze and gaze, finally dying."

REPLY:—The sleepy and drowsy action indicates the large lice on the heads. Anoint with a few drops of lard. The gasping is due to gapes, which clog the windpipe. The remedy is a drop of spirits of turpentine on a bread crumb, once or twice a day. If not relieved, the gape-worms must be removed by inserting a straw in the windpipe, giving it a twist, and dislodging the worm.

Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

To Destroy Weeds.—A. J. S., Windsor, N. Y., writes: "What is the best way to rid a field of wild carrot? Can it be done by cultivation, or must each stalk be pulled up and burned?"

REPLY:—A rotation of crops, including clover, thorough cultivation and, if necessary, summer fallowing, will rid fields of the most troublesome weeds.

Alkali Water for Irrigation.—F. G. S., Texas, writes: "What can I add to my well-water, which contains much lime, to neutralize its bad effect on garden and field? The land contains enough lime, and by irrigating it with that lime-water the earth becomes hard and the plants yellowish."

REPLY:—We do not think it is practicable for you to neutralize the alkali in the water used for irrigating purposes with chemicals. The only way out of the difficulty that we can suggest is to provide for good drainage of the irrigated fields. Flood them well with water, and if it can run off it will remove the excess of alkali from your soil. Alkali spots are made wherever there is no drainage, and all the water evaporates, leaving the minerals it contained behind. As the process is frequently repeated, these spots or basins accumulate deposits of alkali, until nothing will grow on them. Drain the basins, then flood them with water repeatedly, and the excess of alkali will be washed out.

VETERINARY.

Conducted by Dr. H. J. Detmers, Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column, must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances.

Wants a Hoof Ointment.—S. C. L., St. Clair, Nev. I cannot answer your question.

An Ulcerating Joint.—E. C., Kishwaukee, Ill. Consult a veterinarian, and have your mare examined.

A Fractured Leg.—D. W. B., Castalia, S. D. If you had said in your first letter that a bone was fractured I might have been able to tell you at once that, although the animal may live, she will remain a cripple forever. A cure is out of the question.

Wants to Study Veterinary Medicine.—J. F. C., Viola, Tenn. You cannot study veterinary medicine from books. The best you can do is to enroll as a student in a good veterinary school or college, and take a regular course. The school of veterinary medicine of the Ohio State University opens September 12th.

Ringbone.—D. W. G., Pillar Point, N. J., writes: "Please give cure of ringbone on horses. What do you think of the treatment called firing?"

ANSWER:—Wait until next November. It is now the wrong season for the successful treatment of spavin and ringbone. You may consult FARM AND FIRESIDE of November 15, 1891.

Probably Rhachitis.—L. E., Cleburne, Kan., writes: "What ails our calves? At the time when they are old enough to eat their feed they become weak in the back and legs, and cannot stand up. They also have colic. Two have already died."

ANSWER:—Your calves, it seems, suffer from rhachitis. There must be something radically wrong in their feed. Try a change of diet.

Scrotal Hernia.—G. H. D., Shawnee, Kan. If your colt has a scrotal hernia—is ruptured, as you call it—the remedy consists in castration with covered testicle, and an application of clamps on the vaginal membrane. It will not be necessary to give a detailed description of the operation, because any competent veterinarian knows how to perform it, and nobody else should be entrusted with its performance.

Salt for Cattle.—E. A. L., Natchez, Miss. Except near the sea-coast, or such other places where salt particles are constantly floating in the air, and are deposited on the vegetation, cattle should receive small quantities of salt at regular, short intervals of time, say twice a week. Salt in moderate quantities does not interfere with the secretion of milk; on the contrary, it is apt to increase the same, because it promotes the process of digestion.

Weak Knees.—E. H. J., Salem, S. D., writes: "I have a three-year-old colt which, from the time it was born until nearly two years of age, had weak knees, bending forward like a horse knee-sprung. Its legs then became as straight as any, and remained so about a year, when in the spring, just before I began to work him, his knees began to resume their unnatural shape, and he seems very weak and weary in the joints after driving."

ANSWER:—The only remedy that will do any good is good, nutritious food and exemption from any hard work.

A Calf Slobbers—Diseased Joint.—I. L. T., Johnson City, Tenn., writes: "When my calf chews its cud, green slobbers run from its mouth. What can I do for it?—My colt's pastern-joint swelled up, broke and run bloody matter; healed up, broke and is running again. What is the matter?"

ANSWER:—Examine the animal's mouth, and if there is nothing wrong, change the food; feed something that is free from fungous growth and acrid substances. Your colt suffers from arthritis, probably of a pyemic nature. When this reaches you, your colt will be either dead or a confirmed cripple. In such cases a veterinarian should be at once consulted.

Probably Cystitis.—B. N. M., Ramey, Pa., writes: "I have a three-year-old gelding that, although he seems in good condition and eats well, will urinate every hour in the day when in the stable. The urine is thick and very yellow. What is the cause?"

ANSWER:—Your gelding may suffer from catarrhal cystitis, a disease which, as a rule, is either an attendant of other catarrhal conditions or caused by an irritation of the mucous membrane of the bladder, due to the presence of a stone, a concrement or some sediment. It very seldom occurs as an independent disease. Therefore, as your inquiry does not contain anything from which the cause might be ascertained, I cannot answer your question, and only advise you to change the diet of your horse, perhaps from dry feed to grass.

Ought to Have Rest.—F. E., Pavilion, N. Y., writes: "I have a cow, five years old, that has been giving milk for fifteen months. She will be fresh again October 1st. She was giving six or seven quarts of milk at a milking until about May 1st. Since then there are little lumps in the milk, and the amount of milk has decreased to one quart. She is in good flesh, eyes bright, eats heartily, chews her cud, and to all appearances is in perfect health. She has been fed during spring on second-growth clover and four quarts of bran twice a day; now she is out in good pasture. What is her trouble, and what shall I do for her?"

ANSWER:—Your cow, very likely, is not ailing at all, but she ought to have rest after she has been milked fifteen months and has to calve in about three months. Therefore, make her dry, and don't feed too high before calving.

Wounded.—P. T., Good Thunder, Minn., writes: "I have a valuable horse that I pricked with a fork, two inches above the fetlock wart in fore leg, the 16th of March. He has been lame since. I have poulticed it and blistered it with Spanish fly. The higtendons are swollen. When he steps on the tip of the toe he flinches terribly."

ANSWER:—Probe the wound, so as to find out what parts have been injured. If you find that a joint (pastern-joint, most likely) is open, the animal has a good prospect of becoming a worthless cripple. If no joint is opened, and if the pus can be discharged from every part of the wound, you may dress the same twice a day, either with a five-per-cent solution of carbolic acid or with some other good antiseptic. If the opening is large enough, you may use iodoform. Beside that, the leg should be properly bandaged twice a day, each time when the wound is dressed.

Don't Sweat—Moon Calves.—S. R., Moneta, Va., writes: "My horses and mares at times become short-winded, and do not sweat a particle in hot weather. At times, when at work side by side, one will sweat freely, while another will not sweat at all. When in that condition, if driven at a moderate gait for a half hour, they will pant as if almost out of breath. They are not fat, but in good, serviceable order. I feed them on corn, sheaf oats, hay, blade fodder, and at times graze them. I can't see that changing feed makes any difference. What is the cause of a cow having what is called moon calves? Is there a preventive?"

ANSWER:—Concerning your horses, I would advise you to feed them regularly with good, sound food suitable to their condition, and have them regularly and well groomed; also, give them time for digestion after they have eaten a meal.—Your second question I cannot answer.

COUPON

Entitling the sender to the Grand Fifteen Dollar Picture and Gilt Frame, and this paper one year, for Only \$1.50.

MAST, CROWELL & KIRKPATRICK, Publishers, Springfield, Ohio.

For \$1.50 inclosed, please send me the Picture, "Columbus at the Royal Court of Spain," in the large Gilt Frame, made of 6-inch molding, and measuring 31 by 40 inches. Also send Farm and Fireside one year without extra charge. In return for my receiving the picture and frame and Farm and Fireside one year at this low Special Price, I agree to show them to my friends and neighbors, to whom I will endeavor to make sales at the regular price.

Name.....

Post-Office.....

County..... State.....

Write Nearest Express Station here

Also send Farm and Fireside one year free, to my address as above.

If you are already a subscriber to Farm and Fireside, when you accept this offer one year will be added to your present subscription.

A Fifteen Dollar Picture and Gold Frame

Entitled, "COLUMBUS AT THE ROYAL COURT OF SPAIN."

Size of the Gold Frame and Picture, 31 by 40 inches.

HOW TO GET IT

FREE

If you cannot work for us yourself we will tell you HOW TO GET ONE COPY OF THE GRAND FIFTEEN-DOLLAR PICTURE ABSOLUTELY FREE OF CHARGE.

Doubtless you know of some agent canvassing in your neighborhood for sewing-machines, books, pictures, curtains, rugs, churns, washing-machines, or something else. Such agents are always looking for something new—something that will out-sell whatever they are handling. That is just what this picture will do. If you know of such an agent, or if you can learn where one is to be found by making inquiries, hunt him up and place this advertisement in his hand. Induce him to order an outfit, and when the agent you secure has ordered the first dozen

WE WILL SEND YOU ONE FREE.

Put any one to work with this picture, and you shall have one for yourself as soon as a dozen have been sold by him. You are sure to get it. No one can help selling it if he leaves it where people can see it. Carry it on the street, and people will stop to look at it. It will attract attention anywhere. Ten to one he will sell over a dozen the first day, and you will get one free.

WHY NOT SELL IT YOURSELF?

We are offering this grand picture to agents to be sold at such a low price that everybody who sees it is astonished, and quick sales and quicker deliveries are sure to follow. Everybody will want it at sight, and everybody will have it. You can get up in a wagon on any market square, hold one of the pictures up so the people can see it, and sell them as fast as you can hand them out and make change.

Notwithstanding the low price at which this grand work of art is sold, our agents are allowed such a liberal commission that

ANY MAN, WOMAN, BOY OR GIRL,

Can Make Five to Fifteen Dollars a Day,

Selling this Large and Magnificent Work of Art, in Any Locality.

This surprising production of an age when wonders are the order of the day, and nothing short of the marvelous can claim more than passing attention, has produced a tremendous sensation among the lovers of art, not only in this country, but throughout the civilized world. It was painted by the gifted Bohemian artist, Vacsav Brozik, and is now on exhibition in the Metropolitan Art Museum, in Central Park, New York,

THE MASTERPIECE OF AN INSPIRED ARTIST.

Years of patient work were required to complete this colossal and superlatively beautiful Painting. But the Artist was well recompensed, for it brought him not only fame, but gold sufficient for **A KING'S RANSOM**. After months of careful work, with the aid of the most talented artists and skilful workmen, and by employing expensive machinery and the latest and most improved methods, and spending thousands of dollars, we have succeeded in producing a **genuine oleograph** of this wonderful picture, suitable for the parlor or drawing-room.

Competent judges and critics who have examined this beautiful oleograph pronounce it to be one of the **finest pieces of work ever executed in this country**. In it has been reproduced **every line of the artist's pencil, every touch of his magic brush, every color from off his palette**,

RIVALING THE ORIGINAL PAINTING

in beauty and the effectiveness with which the artists have perpetuated the scene, which was the beginning of American history. All the grandeur and impressiveness of the occasion has been transferred to the canvas in such a realistic way that the beholder seems transferred to the very presence of the court and himself hears the impassioned words of Columbus.

WE WANT ACTIVE, EARNEST AGENTS EVERYWHERE,

To sell this splendid work of art. Thousands of families are paying from \$15.00 to \$50.00 for pictures that are daubs beside it. Tens of thousands will gladly avail themselves of an opportunity to secure such a manifest bargain at the surprisingly low price we have placed on it.

THE RIGHT THING AT THE RIGHT TIME.

Could there be a more favorable time to sell such a picture? The World's Fair is to be held in commemoration of the discovery of America by Columbus. He is the hero of the hour. His name is on everybody's lip. Every newspaper and magazine throughout the land is reviewing the work accomplished by Columbus, thus keeping him constantly before the people. Think what an immense advantage all this free advertising will be to you. All this talking and thinking and writing about Columbus, all this money being poured out in advertising him, will help you to sell this picture. **The ladies will buy it if they have to sell rags, eggs, butter, anything to get it.**

THE EASIEST THING IN THE WORLD TO SELL.

People will want it before you have said a dozen words. In many cases they will insist on having your sample copy, and will hardly take "no" for an answer. Agents who have met with but little success in selling other things will find in this picture just what they need. To sell a book or a piece of furniture, you must make an eloquent or a lengthy description of it, stir your customer up, make him feel that he wants it, and if he takes so long to think about it that he forgets what you have said, you must go over the whole ground again. How different with this picture, entitled "Columbus at the Royal Court of Spain."

The Best Chance ever Offered to Teachers, Students, Farmers and Others to make Several Hundred Dollars Quickly and Easily.

AGENTS ARE ALSO OFFERED A FREE TRIP TO THE WORLD'S FAIR,

Including railroad fare both ways, hotel bill and admission to the grounds. This offer is open to everyone. Don't miss this chance to see the World's Fair without costing you a cent, and at the same time clear \$500.00 in cash. It will undoubtedly be the most entertaining, instructive and magnificent exhibition that has ever taken place in any country on the globe, and nothing like it will occur again in at least another century. To miss seeing it will be to regret it the balance of your life. Write for full particulars and learn how you may secure a Free Trip to the World's Fair.

HOW TO ORDER.

1st. You will be entitled to the complete Picture and Frame Free if you induce one person to act as agent, and the picture and frame will be sent to you as soon as the agent you secure has ordered one dozen.

2nd. Cut out, fill up and return to us the coupon on page 8, with \$1.50, and you will receive the complete Picture and Frame, and also this journal one year. If you are already a subscriber, one year will be added to your present subscription. Only one picture will be sold to one person on these terms, and that only to the first applicant from a community.

Address all orders to the Publishers as follows:

FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

HOW TO GET IT

FOR ONLY \$1.50.

One of these Grand Pictures, in Our Large Gold Frame, will be sent to the first reliable person applying from each locality, for only One Dollar and Fifty Cents, if he promises to show it and help introduce it among his friends and neighbors.

This special price is only offered to introduce the Picture and Frame, as the sample is sure to sell a hundred or more in every community in which it is shown. Everyone recognizes it at once as the most wonderful bargain of the kind that the 19th century has yet seen. The heavily-carved and richly-gilded frame alone cannot be duplicated in any picture store for double our price for both picture and frame.

Our profit is in the large sales that follow the sample.

Your profit begins with the sample picture and frame, for even if you should not try to sell them, your sample picture and frame may truly be valued at Fifteen Dollars. The fact is, there are many pictures far inferior to this for which the owners have paid one hundred dollars or more.

But our object in offering you one—and only one—of these pictures at this specially low price, is to induce you to show it to others, and thus to sell a large number of the pictures at the regular price; therefore, as only a limited number of these grand pictures will be sold at this ridiculously low price, we require that you cut out, fill up and return to us with your order the coupon on eighth page of this paper. By using this coupon you agree to show the picture to others, and in return you are entitled to the picture and frame for only one dollar and fifty cents, and

Everyone Accepting this Offer is also Entitled to this Journal One Year Free.

You can take the picture and go from home to home, and sell from 10 to 25 of them a day. No long description is necessary. The picture tells its own story. A look, a question or two, a few words of explanation, a reminder that the Columbian Exposition is concentrating the attention of the civilized world on Columbus, and the order is yours.

WRITE AT ONCE FOR OUR GENEROUS TERMS TO AGENTS.

The bold, masterly treatment of the famous artist has been perfectly preserved, and the drawing of each figure, the expression on each face, the texture of the garments, the brilliant colors, true to the original in every minute detail, blending together in perfect harmony, stamps it as

AN ARTISTIC TRIUMPH.

A happy surprise is in store for every purchaser who secures it. It will surpass the highest expectations. Pictures possessing only a small degree of the merit and artistic value of this are selling in the large cities for \$15.00 to \$50.00.

A LARGE AND HANDSOME FRAME.

The oleograph is mounted in an elegant Three-Dollar, massive, heavily carved, Gilt frame, of 6-inch molding, with receding back and raised center of special design of intertwined rope, complete with cord and hooks for hanging.

Remember, this Grand Picture is made Especially to our order, and can only be Procured through us.

IT'S A PICTURE THAT TALKS.

And it talks while you are silent. The magnificent array of faces and figures; the startling expression on many of the faces; the beautiful colors; the historic value of the picture; the massive and richly-finished frame, hitherto supposed to be within the reach of only the wealthy, all these make their impression on the minds of your customer, with hardly a suggestion from you, and thus

IT SELLS ITSELF.

Every person who sees it will be sure to ask about it, where it can be had, the cost, etc., and when he learns the price he will not rest until he possesses a copy himself. Thus, the agent who sells a copy of the picture leaves behind him a silent but never-tiring laborer, who will work for him, rain or shine, in season and out of season, every day in the week, until every family for miles around has learned of it and all will be eager to buy. Then he has but to take care of his field and gather the golden harvest.

WRITE FOR OUR LIBERAL TERMS TO AGENTS.

FREE A FIFTEEN DOLLAR PICTURE AND FRAME FREE

The Frame we send is 3 feet 7 inches long, of 6-inch Molding.

We will give one of these Grand Pictures in the Magnificent Frame

FREE

to any one who has an Agent who will sell one dozen of these Grand Pictures and Hand some Frame, at the regular price.

There is not a man or woman, or bright boy or girl, in any community, but who knows of a number of good agents who are now selling other articles. Call the attention of the best of these agents to this Grand Picture and Frame, and induce him to order an outfit, and when he has ordered one dozen pictures, we will send you a Picture and Frame Free.

Any good agent can easily sell several dozen in a few days, so that by very little effort the Prize will be yours.

Or,

YOU can easily sell one dozen of the Pictures and Frames, and reap the big profits yourself. Write for our liberal terms to agents at once.

This small one, having, printed in one color, conveys but a faint impression of the beauty of the Picture, which can be appreciated only by seeing the photograph in all its Rich Array of 14 Colors. That give the Life and Spirit which all Engravings lack.



THE FRAME WE SEND IS 2 FEET AND 7 INCHES HIGH.

Or,

One of these Grand Pictures in our magnificent Gold Frame, with its fine molding, will be sent to the first reliable person applying from each post office, for only

One Dollar and Fifty Cents.

It he prompt to show it and help in introducing it among his friends and neighbors.

We offer one at the low price because we ever at present are to be found and manifest a volume of a hundred or more copies.

To secure this wonderful Picture and Frame at this special price, you must fill out and return with your order the coupon on this page of this paper.

Every person who orders one of these pictures and frames will be entered in this contest for the prize.

During these Columbus Anniversary days, you can make more money selling this magnificent Picture and Frame than with any article now being sold by agents.

See the terms of this most Wonderful Bargain of the 19th Century on page 9, just ahead of this page.

COLUMBUS AT THE PALACE OF SPAIN.

Size of Picture, 20 by 28 inches. Size of Frame and Picture, 31 by 40 inches

Our Fireside.

A TEACHER.

Preachers have preached me sermons,
I have slept their sermons through;
All my relations have lectured,
My friends have lectured, too.

My foes have given me warnings,
And I have taken them not;
Friends and foes and relations
I never heeded a jot.

Their words were the essence of wisdom,
There was nothing they didn't foresee;
And not one atom of all they said
Has ever remained with me.

They were staid and pallid and solemn,
They were gray and wrinkled and old;
My teacher has cheeks of roses,
And hair of the sun's own gold.

His words run into each other,
He stammers and babbles and cries;
He doesn't know he is powerful,
He never dreams he is wise.

But in three short years he has taught me
More than those graybeards staid
Had taught in the seven and thirty
Before he came to their aid.

—New York Independent.

NAPOLÉON'S WOOING.



LOOKING his own supper over a blazing wood fire one hot evening in July, Napoleon Crowe felt that he was indeed horn to misfortune like the sparks that flew upward.

For forty years he had tilled the stony, stubby little farm which, at its best, had never yielded its owner more than a precarious living, and now at the age of sixty he was alone in the world, having a few mouths previously buried his third wife.

Whether it was owing to an inherent delicacy of constitution, a lack of appreciation and tenderness on his part, or a too continuous diet of stewed yellow-eyed beans and pork, we are unable to determine, but for some mysterious reason, Napoleon's wives refused to thrive on his hands, and drooped and pined away, one after another, until he was convinced that in his case marriage was a failure.

That he had been his own housekeeper for seven months, every room and closet in the dreary old farm-house bore evidence, and the numerous scars on his hands and arms testified to the burns and scalds he had received during his cooking operations.

For Napoleon was peculiarly unfortunate in his culinary experiments. If, after serious reflection, he decided that he could afford a small roast for the Sunday dinner, to which he invariably invited his old crony, Jotham Sparks, that roast—so tenderly watched and jealously guarded for hours—was in the end temporarily forgotten while Napoleon was grappling with the biscuit problem, and burned to a blackened crisp.

He baked beans without pork, forgot to put the meat in his soups, or the salt and pepper in his vegetable hash; left out the sweetening from his apple pies, the salt from his butter, the eggs from his custards, and wondered why he had no appetite.

After a multitude of disastrous failures similar to the ones we have recorded, Napoleon resolved he would, from motives of economy and otherwise, confine himself exclusively to a diet of flour biscuit hot from the oven, alternating with such relishes as molasses, fried pork fat and the unsavory production which once in four weeks he churned and spanked and patted with his big, hairy hands, and designated as "butter."

Three times a day, regularly, Napoleon produced a small, wooden dough-dish, and after mixing sour milk, saleratus and flour, toiled and sweated over the sticky mass until it went into the oven, huge, unsightly spots of sticky dough, and came out the same.

It may have been the legitimate result of eating his own hot biscuit, but within a few weeks he had developed into a gloomy pessimist. He neglected the poultry and stock, allowed the weeds to flourish in the garden, and seemed to have lost all interest in life.

Everything went wrong with Napoleon. The old cow went dry three months earlier than usual, and the two-year-old heifer choked to death in her stall. As a natural sequence, his groans and sighs became louder and more frequent.

Thirty hens and two roosters cackled shrilly from morn till night, and though he crawled under the bar on his hands and knees, at the risk of a personal introduction to a skunk who made his headquarters there, and climbed ladders to the highest scaffold at the risk of breaking his neck, not a solitary egg gladdened his anxious eyes.

One morning his friend and sympathizer, Unele Jotham Sparks, called before breakfast to borrow a rake.

"Jest hevin' a bite, hey?" observed Unele Jotham, his eyes wandering to the bare pine table adorned by a tin of steaming yellow bisquit.

"Ya-a-s," answered Napoleon in a dissatisfied tone; "I'm tryin' to heat a drop o' water to make a cup o' tea to go with them ere bisquits. Won't you hev a bisquit, Jotham?"

"N-no-no," responded Jotham with alacrity. "Thanky, I've been to breakfast an hour ago."

"I know it's late," sighed Napoleon, "but I've had a regular tussle to heat this dipper o' water. I broke my tea-kettle by pourin' cold water in it when it was red-hot, and I hain't had any tea-kettle to use all summer. It's ter'ble bard for a man that hain't never been used to puttin' round the house to do his own cookin' and house work."

"It must be, I vnn," said Jotham, and he edged away to an open window to avoid an offensive odor that arose from a bean-pot on the stove-hearth.

"Jotham," said he solemnly, "Jotham, ain't you seen, can't you see that I'm fallin' from the crust?"

Jotham shook his head mournfully as he stopped to light his pipe.

"Yes, Napoleon, I've seen all summer that you've been fallin'; you've grown old, and thin, and gray, and bent over, and don't look much like the man you was a year ago."

"Do you think I'm p'inted for the grave, Jotham?" he growled.

"No," said he bluntly; "but you won't live six months unless you get some woman here to cook your vittles, and do your washin' and keep the house wholesome. Why don't you hire a woman, and pay her so much a week?"

"I couldn't afford it. All the income I git from the farm wouldn't pay her wages. I think myself, not relishin' my vittles has somethin' to do with my onhappy feelin's."

"You might git married," suggested Jotham.

"Ya-a-s, I've thought o' that. I know of a smart, likely woman that's wuth some prnp-putty that I think would jump at the chance to get me to-day. She's a widder that I courted some when I was young, and lives on a farm somewhere in Stoughton. I'd slick up a little and go up and see if she would like to change her condition, if 'twasn't for neighbors talkin'. You know I hain't been a widderer this last time only about seven months."

"I know; but circumstances alters eases, and if you can't afford to hire a housekeeper, you had better hunt up a wife lively. Let folks talk if they want to. You hev a smart woman come here and scrub and scour, and brighten up things, and cook you three good temptin' meals every day, and you'd soon begin to fat up, and be as strong and ambitious to work as ever you was in your life. Now, I do hope, Napoleon, you realize jest how slim and peaked you are lookin', and if you don't want to slip your wind afore the snow flies, take my advice and marry that 'ere widder jest as soon as she'll hev you." And taking his rake, Jotham departed, leaving Napoleon to his thoughts, which were not pleasant by any means.

For several days after Napoleon wandered around in a discontented, absent-minded way, as though he was uncertain whether to take Jotham's advice or not.

At length, on this hot July evening when we introduce him to our readers, having nearly caused a conflagration by upsetting a kerosene-lamp, which exploded in the flour-barrel, Napoleon gnashed his teeth as he tore around the room in his efforts to extinguish the flames, and vowed he would have a wife to cook his suppers before the week was out.

"Ain't this a pooty way for a man o' my years to be livin'!" he muttered savagely, as he vainly tried to make the lantern-wick burn. "There, the danged thing has gone out, and I might as well give up; I've got to set here in the dark, or else crawl to my bed without a solitary nibble in my poor stummoek, and I'm ready to faint. S'pose I'll put up with this any longer? Not by a jugful! If the sun rises to-morrow mornin' I'll see me streaking for the Widder Spooner's. Let the neighbors talk if they want to; what they say don't put slab-jacks into my mouth, or mend the big holes in my stockin's. Yes, sir-ee," and he snapped his fingers defiantly, "let 'em talk, I don't give a dang. If Eunice Spooner will have me, we'll be married short off!"

* * * * *

The Widow Spooner was in her strawberry patch, pulling up the weeds, and was about to throw them over the fence, as little Kittie Henderson came rushing around the corner.

"Oh, Aunt Eunice," she exclaimed breathlessly; "mamma sent me over to borrow some cream of tartar, and don't you think, the awfulest-looking old tramp has followed me way through the woods, and he's sitting down on the big rock in the lane now! Oh, dear, I daren't go home. What shall I do?" And Kittie began to cry.

"Tramp, hey?" said the widow coolly. "That's nothing new; I've been jest pestered to death with tramps this summer. There was two called here last night, and they was jest as sassy as a lord, and wanted me to give 'em some supper, but they didn't git any, jest the same. You wait a minute till I can look after my bakin', and I'll go home through the woods with you, Kittie. I never see the tramp yet I was afraid of."

With Kittie following close at her heels, Mrs. Spooner proceeded to the kitchen, where, throwing open the oven doors, she displayed a pair of the most beautifully browned chickens, which sent forth a most appetizing odor.

"There, Kittie, jest look at my fowls; ain't they doin' lovely? I've been doin' lots of cookin' to-day, and I do wish some interestin' company would happen along. I've had signs of a stranger all the afternoon; two chair-backs got together, and I bumped my elbow ag'in the pump-handle—"

At that moment there came a loud knocking at the door. Kittie gave a little shriek.

"It's—it's—him, auntie," she gasped. "It's the old tramp."

"Is it?" said the widow brusquely. "Jest let me git my weapons ready, and I'll soon start him goin'."

With a sancepan of boiling water in one hand and a fire-shovel in the other, Mrs. Spooner advanced boldly to the door.

In the semi-twilight stood a seedy-looking individual, wearing a slouch hat covered with dust.

"Could—yon—ahem—give—me," he began in a hesitating manner, then hastily retreated a few steps as he caught a glimpse of the warlike implements in the hands of the widow.

"Yes, I'll give you," cried the widow, "a good whackin' with my shovel, and a scaldin' to boot, if you ain't off my premises before I can count ten. You great, lazy loafer! Ain't you ashamed, round trampin' and beggin' your livin'? Why hain't you workin' on some railroad, diggin' ditches, yon shiftless hulk?"

"I—I—hain't roun' beggin' no livin'," stammered the man, his eyes firmly riveted on the widow's weapons.

"I—ain't no tramp, neither, I'll have you to know—I—"

"Oh, no, you're no tramp, none of 'em is; you're a hank president, most likely. Come, git, put yourself."

"I won't stir a blasted peg," he spluttered. "You can't drive me till I've had a chance to tell you who—"

"I can't, can I? We'll see about that, you wretch. Follow me with the tea-kettle, Kittie; I'll scald him to death."

Mrs. Spooner's appearance as she screamed out these words was more that of a modern Amazon than a staid, elderly widow, and with a smothered shriek, the man fled precipitately before her, never pausing until he ignominiously tumbled over a rock-heap by the roadside.

"There, Kltty," exclaimed Mrs. Spooner, as she came into the kitchen flushed and triumphant, "I've sent him about his business. I've learned that soft words don't count any more with the tramp gentry, and I guess this particular one won't visit me ag'in."

"Why, auntie," said Kittie, staring hard out of the window, "he ain't gone; he's sitting down by the barn now."

"Why, how you talk. Has he had the impudence to come back here? Well, now you jest wait; I'll start him out of my door-yard, or I'll know the reason why."

With hurried and determined steps she took her way down to the spot where a forlorn-looking figure was seated on a huge howler, sorrowfully rubbing his knee-joints.

"Come," said she, "what in the world do you mean by hangin' round here? Why don't—bless my soul—this ain't—it can't be—Napoleon Crowe?"

"Yes, it's me," said Napoleon, plaintively.

"Took to trampin' round the country and scarin' little girls? You!"

"It's a danged mistake," said he. "I hain't trampin' round no country, nor scarin' no little girls, either. I was't never in this place before, and I didn't know fur certain which house you lived in, and so I was golu' to inquire if you could give me any idee where the Widder Spooner lived, and you come at me with a fire-shovel and a bucket o' bien water."

"Why didn't you give me your name?"

"You didn't give me no chance, did you? I tried to tell you my name, but I couldn't get a word in edgeways. I expected a different welcome from you, Eunice, bein's we was allus sech good friends, and I'd walked fifteen miles to ask you to marry me."

A warm flush rose to the widow's sunburned cheek. If there was a person on earth who had always held a warm corner in her heart it was Napoleon Crowe.

"Napoleon," hazarded she, "it was a dretful misundstanding."

"I should hope it was, I swan," sighed Napoleon, still rubbing his bruised knees.

"It was Kittie's fault; she told me there was a tramp at the door, and I was that mad and excited I never took a good look. You've no idee how I've been pestered with thievin', sassy tramps, Napoleon."

"I don't doubt it, Eunice. You hadn't ought to be livin' here alone."

"You ain't golu', Napoleon? Do stop and have some supper—"

"Do you really want me to, Eunice?"

"Of course I do, Napoleon; and we'll have roast chicken and cream biscuits."

"And you'll hev me, Eunice?"

"I shouldn't wonder, Napoleon."

So Napoleon stayed to supper, and after partaking of the roast chicken and cream biscuit was in such excellent spirits that he tossed Kittie up and down in his arms, and presented her with a nickel and two pennies, a freak of generosity on his part without precedent.—*Yankee Blade.*

CHEAP ELECTRICITY.

A Frenchman has again come forward with a proposition for "obtaining electricity for nothing." It remains only for an American to improve this method so as to be able to throw in the usual chromo in addition. The Frenchman's proposition is, however, not unreasonable. Some years ago a company was started in France for obtaining electricity as a by-product in the manufacture of copper sulphate. They sold the electricity in accumulators. The present proposition is to obtain

sufficient current for running a few lights in a private house by means of the thermopile heated by stoves used for warming the rooms, or for cooking. As such stoves must be used in every house, he claims that the electricity is obtained as a by-product, which costs nothing. If the miserable little Paris stoves, which have a greater effect on the imagination than on the temperature, are sufficient to run an arc light, an ordinary American stove ought to be able to illuminate a house as bright as daylight by this method. One of the great difficulties experienced in thermopiles is in the melting of the solder at the joints; to overcome this, why not weld the two pieces together electrically? This ought to be far superior, and would probably be quite as cheap, if not cheaper.—*Electrical World.*

A SIMPLE RELIEF FOR LUNG TROUBLES.

It has long been known that pine needle pillows would alleviate persons afflicted with lung troubles, and a Florida editor relates an incident in support of the fact, as follows: During a visit to the home of a most estimable lady living on Indian river, this editor was told of a discovery that had been made which may prove a boon to sufferers from lung or bronchial troubles. This lady having heard that there was 'peculiar virtue in a pillow made from pine straw, and having none of that material at hand, made one from fine, soft pine shavings, and had the pleasure of noting immediate benefit. Soon all the members of the household had pine shavings pillows, and it was noticed that all coughs, asthmatic or bronchial troubles abated at once after sleeping a few nights on these pillows. An invalid suffering from lung trouble derived much benefit from sleeping upon a mattress made from pine shavings. The material is cheap, and the *Christian at Work* says it makes a very pleasant and comfortable mattress, the odor of the pine permeating the entire room and absorbing or dispelling all unpleasant odors.

A SIMPLE PRECAUTION.

"Just look at that child," said one lady to another, as they stood by a window, watching a group of children at play on the street. "Her ears stick out from the sides of her head like the sails of a ship. Such an affliction as that is really dreadful. Every little while one sees children—grown-up people, too, for the matter of that—with wide, projecting ears. It's a pity, too, when such a thing is so easily prevented."

"Children should be very carefully watched, and should never be allowed to sleep without having the ears pressed close to the head. Some children are restless, and squirm about until the ears are turned over toward the face. As a matter of course, this forms a habit, and the first thing any one knows the beauty of the child is spoiled. It only takes a little care and attention to remedy all of this, either in the case of children or grown persons. The worst deformity of this sort may be remedied in a few months by the persistent effort to keep the ears pressed close to the head even at night. Before retiring, rub the back of the ears thoroughly with some soft, penetrating oil or glycerine; then tie a bit of lace or thin muslin around the head, to keep the ears close. During the day a similar bandage might be worn, if it is not necessary to go out or to receive callers. Babies should always wear caps, even though they may be of the sheerest mull or lace. This will entirely prevent the ears assuming such unbecoming shapes as we frequently see. Of course, it is often more difficult to remedy an evil than prevent it, and judicious mothers and nurses will never allow such accidents to occur. Where the cartilage of the ear seems to have been pressed out of shape, it may often be desirable to rub some oil or cold cream on the outside, but if the eap is worn or a bandage is put around the head at night, this will never be necessary. In extremely bad cases, where the cartilage has grown too much out of shape, the services of a surgeon may be found necessary. Such precautions should never be neglected as will save the child from embarrassment and discomfort later in life. More than one child has been made unhappy by the ridicule of its companions on account of some personal deformity which a judicious mother or nurse might have avoided."

Queen Margarat, of Italy, though somewhat inclined toward embonpoint, is nevertheless a beautiful woman even yet. It is said that on the day of her marriage (in 1868), when receiving the foreign ambassadors and ministers, she spoke to each of them in their own language. She is highly educated and has a special taste for literature. In public she always shows perfect tact and taste, and she is very popular and respected by all her subjects.

Sick Headache

jaundice,
liver complaint,
biliousness, and
dyspepsia,
cured by

Ayer's Cathartic Pills

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.

THE SECRET OF YOUTH.

It is sad to see how many elderly and middle-aged women take it for granted that life holds nothing for them but the role of grandmother. Many a woman has but little time for study while rearing a family; but when the children are married and gone to homes of their own, then comes the time when she needs some outside interest. If she has not something to take her out of herself she will turn to gossip and fancy work to keep her busy.

This is just the time for her to devote herself to some study. Let her take up the one that was a favorite in her school-days, whether it be one of the sciences, painting or music. If she has no predilection for anything, let her try several things until she knows what she likes best.

If she never does anything worth showing, the time will not be lost, for the happiness found in these hours of absorption in a chosen pursuit cannot be easily estimated.

But the middle-aged woman may surprise herself by making a great success of her undertaking. The time would fail me to tell of the distinction that has been won in different fields by people far from young. Schlicmann was thirty-four years of age before he knew a word of Greek. George Elliott was thirty-five when she put her hand to the first of her great novels. Prescott published the first of his almost perfect histories at the age of thirty-five. Ogilvie, who made an excellent translation of Homer, began to study Greek at fifty.

The first of the Waverly novels appeared when the author was forty-one, and Cowper was nearly fifty before he did his best work. When we think of Mary Somerville at sixty, writing upon the physical science, of Gladstone at eighty, hewing his oaks and studying Homer, and of Tennyson, also an octogenarian, writing "Across the Bar," no one can hold his hands and say: "I am too old to do anything of any moment."

"A man is only as old as he feels," says Oliver Wendell Holmes, who certainly carries a young heart, if his head is gray.

Numberless cases that are not so marked might be cited. A woman whose stories have done an incalculable amount of good did not dream that she could write until her children had gone to homes of their own, and she began to write to beguile her loneliness. Another woman, whose songs are household favorites, did not know anything of the theory of music till she was fifty, when she began to study harmony. To-day she is well known as a composer, and her music supports her most comfortably.

A grandmother used to dabble in her granddaughter's paints, and became so interested that she studied under a good teacher. To-day her pictures have an honored place in the water-color exhibitions.

Every woman cannot be an artist, author or musician, but everyone of us can have some wide outside interest. We can take up a course of reading that will sensibly broaden our horizon; if we cannot travel, we can go around the world in books, and thus glean no small benefit without the toil of travel.

LIME-WATER.

Lime-water is very useful in the household, and a bottle of it should always be in readiness.

To make it, place a piece of unslaked lime in a clean bottle and fill with clear, pure water. Keep it in a dark, cool place. It is soon ready for use. As the water is poured off more may be added.

A teaspoonful in a cup of milk is an excellent remedy for delicate children whose digestion is weak; it is also beneficial to persons suffering from acidity of the stomach. It gives no unpleasant taste to the milk or other articles of food in which it is put. When a little lime-water is added to cream or milk which must stand some time, it will prevent its soured. In cooking, where milk is used, a few drops will prevent curdling. Some cooks add two or three tablespoonfuls to bread sponge in very warm weather to keep it sweet.

Bottles, jugs or jars that have become impure from long standing can be thoroughly cleaned by washing in lime-water.

A mixture of one part lime-water and two parts linseed-oil applied at once to a burn will be found excellent. Lime-water is a good wash for sores, and when thrown into sinks or other foul places will cleanse and purify. It is also a remedy for poison.

It being very easy to prepare and no expense, a bottle should be found containing it in every household.

SAVING WORLD.

"You would scarcely believe," said a lady to a caller, who dropped in one morning, "but I haven't swept my parlors thoroughly in three months, at least what we would ordinarily call sweeping them, and I am sure you will agree that they don't look it. Of course, I have points in my favor, as there are no children about the house, except those of casual callers; but even then I should not be such a slave to a sweeping-day as most of my friends are. To begin with, I never allow my rooms to get all littered up. To be sure, eternal vigilance is rather hard work, but all the same, I think it pays. I never see a scrap of any sort on the carpet without picking it up at the first opportunity. I take pains to keep things as far as possible in their places, and between you and me, what I think is the strongest of

all points, I have just as little in my rooms as I can get along with. For years my life was a burden with bric-a-brac and trinkets and ornaments and draperies and fancy articles of every description, which had to be put in order and dusted and looked after daily. Now I keep within easy reach a very large, soft square of flannel. This I wring very dry out of clean water, and once in a while move an article of furniture and wipe the dust off from the carpet under it with this cloth. I never bother myself to go over the whole room at one time, but just keep track of the places where dust is most likely to accumulate. My dusting is done with soft, rather large cloths. I wipe up the dust with the utmost care, working very slowly, and between every article I take the cloth to the open door or window and give it a thorough shaking. In this way I not only clear the dust off from the articles in the room, but keep it from the carpet and get it out of the room altogether.

"There is science in everything, even in dusting a room, and I contend, and with a fair array of facts to prove my statement, that if the parlor is properly cared for, one sweeping in a month will answer every purpose. Of course, sitting-rooms and dining-rooms need more care, but then, once a week is plenty, if the dusting-cloth and brush are used with discretion and thoroughness."

THE CARE OF CUT FLOWERS.

When you receive flowers from a florist and do not wish to use them at once, if they appear fresh and their petals brittle, leave them in the box and put in a cool place, as in the ice-chest, a cool spot in the cellar, or out of doors. Do not make the mistake, however, of putting them out of doors unprotected from the wind and frost; either will shorten their lives. Should they get touched by frost, immerse them in cold water for several minutes. If they have not been too severely affected they will revive under this treatment. Sometimes perfectly fresh flowers will droop their heads when placed in a warm room. This is often caused by the stems being too long. By cutting them off a little and treating as suggested above they will soon revive.—*Ladies' Home Journal*.

ODDS AND ENDS.

There are 18,000 women journalists in London. Their earnings average about \$5 a week.

Mrs. Edison, the wife of the man who has applied the electric light to domestic purposes, prefers candles to any other form of household illumination.

Pearls must never be allowed to get damp or they will rot; always clean them with a piece of fine cambric. Diamonds, however, should be scalded with hot water and thoroughly dried.

Senora Isadora Cousins, of Santiago, Chili, is said to be the wealthiest woman in the world, owning land, railroads, ships, mines, manufactories, etc., amounting to billions of dollars in value.

Mme. Caroline Popp, the oldest of Belgian journalists, has died, aged eighty-one, at Bruges. Since 1837 she had been the editor of the liberal organ, *Journal de Bruges*. She was a clever writer and a friend of Victor Hugo and the romantic school. Many of her works are very remarkable.

The personal appearance of Miss Alice French, better known to the reading public as Octave Thanet, contradicts the occasional slurs upon the dress of literary women. Her clothes are always of the neatest and daintiest, and she has an indescribable look of refinement and trimness.

It is said that Mercedes Lopez, a Mexican woman who lives on the Rio Grande, is perhaps the longest-haired woman in the world. She is some five feet in height, and when she stands erect her hair trails on the ground four feet eight inches. Her hair is so thick that she can draw it around her so as to completely hide herself. Her present suit of hair is only five years old.

We make room for a few extracts from letters received from agents since this issue commenced printing. If you want to make money rapidly, send for our outfit at once. Read the offers on 9th page.

Picture or Frame Could not be Improved.

NEWBURYPORT, MASS., June 20, 1892. The picture arrived in perfect condition. I think both picture and frame are very artistic and very handsome, and cannot see how either could be improved. Will begin canvassing at once. G. L. BLOOD.

An Experienced Agent says this Picture will Outsell Anything.

LAIRDSVILLE, N. Y., June 19, 1892. I received the picture, and it surpasses my expectations. Took one order before I got it unpacked, and the gentleman was so anxious to get it he wanted to pay the cash right down and did not know how to wait until I could order some. I have been a book agent, but think this Picture will sell the best of anything I have ever seen. WM. W. IRVING.

A Grand Success.

WEST ALEXANDRIA, O., June 20, 1892. The beautiful frame and elegant picture, "Columbus at the Royal Court of Spain" received in perfect order. The picture alone is worth twice the price asked for picture and paper. I predict for it a grand success both for you and the agents who may handle it. L. J. ASHWORTH.

Be sure to read the offer on page 9.

AN EASY WAY OF WASHING CLOTHES.

Frank Siddall's Soap

Is **GUARANTEED** to cut down the labor on wash-day so that a delicate woman or young girl can do a large wash without being tired; and makes the clothes clean, sweet and white without boiling or scalding, and **WITHOUT INJURY** to the most delicate fabric.

THE FUEL SAVED ON WASH-DAY PAYS FOR THE SOAP

It Does Away With The Wash-boiler Nuisance.



LADIES, TELL YOUR FRIENDS— CHILDREN, COAX YOUR MOTHERS— HUSBANDS, URGE YOUR WIVES—

To let the wash-boiler stay in the closet next wash-day and give one fair, honest trial to the Frank Siddall's way of washing clothes—after one fair trial a house-keeper will never go back to the old, hard, slavish way.

A Trial Package Free.

Make the following promises and a trial package will be delivered to you by mail absolutely free. The promises must be plainly made or the soap will not be sent.

Write a postal card like this, filling in the blanks with your name and post-office address, and also your neighbor's name.

I promise to use the soap, if sent free, on the whole of my regular family wash, the first wash-day after I receive it.

Mrs....., a neighbor, has promised

that she will come and see the washing done.

Name.....

Post-Office.....

County.....

State.....

Just think! Clothes washed clean, sweet and white in **LUKEWARM WATER** and hung out to dry **WITHOUT BOILING** or **SCALDING** a single piece! Heat the washwater in a **TEA-KETTLE** and follow every little direction. Each lady who sends for this soap will also receive a pamphlet book telling of at least fifty other uses for this wonderful soap. It is the only soap that has ever been made in the history of the world that is adapted for all uses.

Tell all your neighbors and friends to send to us for it. It will cost them nothing provided they make the promises.

In order that our subscribers may know that this offer is genuine, and because we want the women to learn this easy way of washing, we have agreed that the postals may be sent to us, and we will see that the soap is sent just as promised, and hope that many thousands of our subscribers will avail themselves of this generous offer at once.

Write your postal card as above and address it to

Publishers **FARM AND FIRESIDE**, Springfield, Ohio.

Our Household.

THE GIRL FOR ME.

BY ELLA HIGGINSON.

She is shy, yet she is gay, she is like a flower in May,
And her hair is just a sunbeam caught in a curl.
She's at home in silk and satin, can converse in Greek and Latin.
She's the neatest and the sweetest little girl!
She can strum on the guitar, tell you all about a star,
And her parents 'round her finger she has wound,
But when all in all is said, when it comes to making bread,
I confess this lovely girl is not around.
Oh, her hands are full of grace when she weaves her Irish lace;
She can make rare point and Honiton, too.
She knows Kensington by heart, and the principles Delsarte;
She can make an old gown look good as new.
Her young soul fairly yearns over Tennyson and Burns,
Over Keats and Goethe, Browning and Hugo;
But about the puffs and cakes that my dear old mother makes
Not a recipe or mixture does she know.
She can tell you accurately each event of history,
She has read from Moses to the "Quick or Dead;"
Has been upon a foreign tour, and she dotes upon the poor,
She can paint a rose or a Madonna head.
She can play and she can sing, shoot a bird upon the wing,
She adores lawn-tennis, billiards and croquet;
She affects a fluffy gown, waltzes light as thistle-down,
But she don't know what to put in consomme.
She has just the sweetest lips, and the softest finger-tips,
On her cheeks the slyest dimples try to hide,
And her timid, blushing kiss so entralls my soul with bliss,
Her deficiencies I've not the heart to chide.
I do not care a whit if she cannot cook a bit,
She's the only girl for me beneath the sun;
For when we are sweetly wed, if she cannot make the bread,
Her papa is rich enough to have it done.

WOMEN'S INTERESTS.

IN THE address of welcome before the Federation of Women's Clubs, at Chicago, Sarah Hackett Stevenson, president of the Chicago club, said: "Housekeeping does not begin at the front and end at the back door, but rather begins in the street, and includes the back alley and all the vacant lots around." In this she is ably seconded by the Housekeepers' Association.

"We have heard much and hoped more of the brotherhood of man. But it is just beginning to dawn upon the world that the first step toward the brotherhood of man is the sisterhood of woman." And this, I take it, is the meaning of this great gathering of serious, high-minded women here to-day. Man has been so afraid of his rights that he has lost the greatest of his rights—the intelligent help of woman.

And so this biennial has a deep significance. "What is she for?" a wondering child once asked, when gazing at a woman dressed in the extreme of fashion. There is no doubt as to the meaning of this great movement for the formation of women's clubs. It is not in vain that old Massachusetts sends representatives from eighteen clubs, which are headed by that veteran leader, Julia Ward Howe, and so on through the roll of states. We have also with us a delegate at large representing clubs for women everywhere. She has perhaps done more clubbing and received more clubbing than any woman in the country—Miss Susan B. Anthony—and the more clubbing she has received, the stronger has grown her head and the softer her heart.



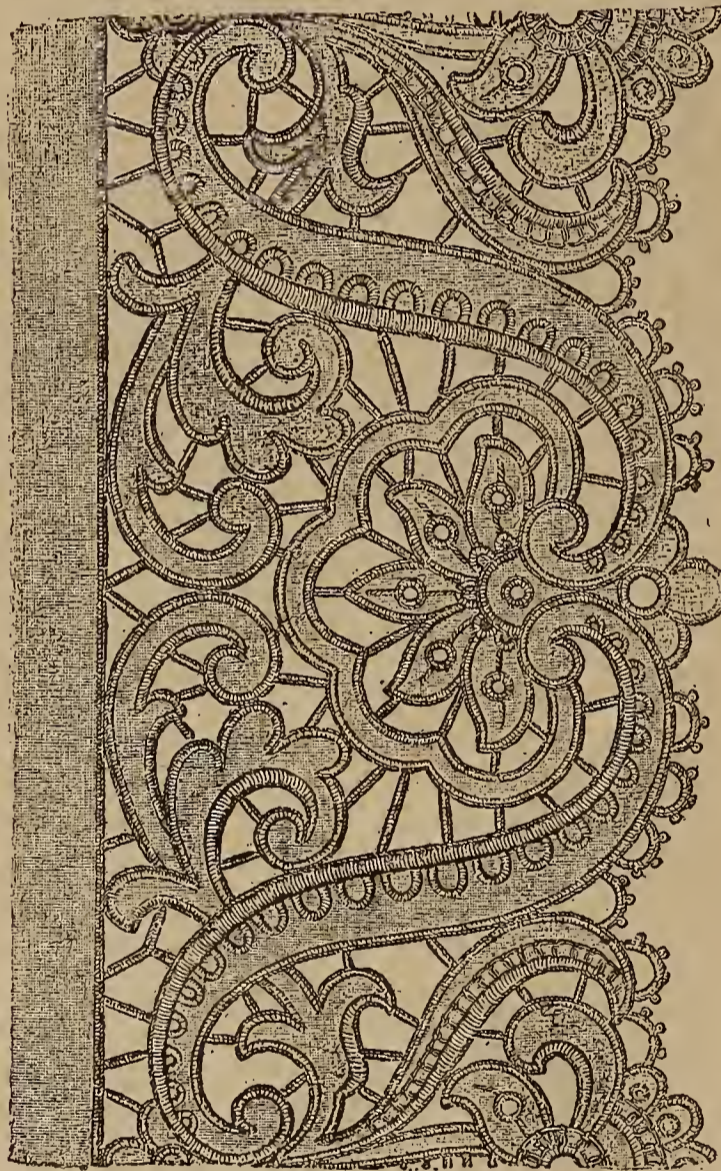
EDGING—VENETIAN EMBROIDERY.

But there is one vacant chair among us that I am sorry to see. It is that of the working woman. There is a great opportunity now within our grasp—the opportunity to emphasize the importance of hard work for humanity at large; the opportunity to burn into the hearts of the people that the sin of the world is the degradation of labor; that idleness, not

work, is a disgrace to woman, and that clean hands, not white hands, are to be joined together in this federation. Democracy alone will not solve the social problem. We must have an aristocracy, not of birth or of wealth, but of character and will. Not until brain workers learn to use their hands and hand workers learn to use their brains, and both learn that there is no such thing as menial work, is there any hope for humanity. Good, hard, wholesome work is physical culture with a meaning attached to it, and eight hours a day of it are none too much for every adult. Eight hours for work, eight hours for study and eight hours for rest—what better division of time for man, woman, king or people? Count Tolstoi, breaking his great heart among the starving peasants of Russia, is looking to just such organizations as ours to turn the hands of the clock of the twentieth century toward the morning hour of the world. The labor question cannot be solved until we learn to labor, and not to despise our work. The woman who knows how to support decently seven people on forty-five dollars per month knows something of more value to the world than all our fine essays and mutual admiration. She should be here with us. Let us stop talking sisterhood. Let us live sisterhood.

A CONVENIENT PIE-BOX.

It has often been asserted that the American people were a nation of pie eaters. Sometimes we think the country people are more addicted to the pie-eating



BORDER—VENETIAN EMBROIDERY.

habit than are the townspeople. Be that as it may, pie is a handy dessert, whether a healthful one or not, and may be kept on hand two or three days, if one has a storage-room for them.

If shelf or cupboard room is limited, a most convenient pie-box is made by taking a box about fifteen inches square, hinging on one side for a door, and putting in five or six thin shelves. The bottom of the box and each shelf will then hold one pie on a plate, the box thus making a tight, clean, handy receptacle for six or seven pies, and will, if set on a shelf in the pantry, take up less room than two pies would.

It might be nailed to the wall, and thus utilize space otherwise wasted, or it could be hung in cellar or cellarway. A stout strap, securely nailed to the top, will be a convenience in carrying it from place to place if it is not stationary.

CLARA S. EVERTS.

A LITTLE TALK ABOUT DRAWING.

Recently a reader of FARM AND FIRESIDE wrote me a letter and enclosed one of his drawings. He asked, "Do you think I can become an artist?"

What do you think he had drawn? Peanuts. They were admirable. Carelessly thrown on a table, three of them close together, one seen lengthwise, and one foreshortened, they presented difficulties enough. But the shading was well managed, and the roughness of the shells was exactly shown. Everyone who saw the picture exclaimed, "Yes, whoever did that will make an artist."

He had shown good taste in selecting a common, every-day subject. How wise, how sensible! Sometimes a person thinks he could write a story, "if he only had something to write about." In truth, there is material all about us, and the best is nearest at hand. So if you wish to draw, take a lead-pencil, a piece of paper and draw a broom leaning in a corner of the room; father's overshoes, left on the porch; the clothes-basket, after it is filled, under the clothes-line; a basket recently filled with apples; mother washing dishes at the kitchen table; the baby sitting on the floor.

Many of these subjects are difficult, but you can make their pictures in a suggestive manner, if not highly finished.

You will find that the way you shade certain articles has much to do with the expression. One of my little friends who is studying art at her boarding-school had tacked on her wall several sketches. There

was one which had a doubtful look. I asked: "Is it a gymnasium club, or a potato-masher?" She said, "It is a bottle!"

Now, her outline was not incorrect, but she had failed to put on the sharp, brilliant touches of light which distinguish glass from wood. Whatever is smooth and polished must have the bright, sharp touches of light. Take, for instance, the different kinds of fruit. Apples, grapes and cherries are smooth, and if you look at them with a critical, artistic eye, you will notice the sparkling touches of light. With rough fruits, oranges, peaches and plums, there is a difference.

The young artist who made the successful peanuts could make an interesting series of nut pictures. There are walnuts and hickory nuts which grow on the farm, besides many varieties which are cheap at the stores.

I cannot see anything very poetic about drawing vegetables, but some of them have brilliant coloring. The rose-pink radishes are very pretty, and tender lettuce may be combined with them to form a picture that would adorn a corner of a dining-room. We all know what a favorite picture can be made of a luscious watermelon. But we are getting away from our subject, which is not painting, but drawing vegetables.

For a first effort, try a large Irish potato. It has sufficient character to make it easy to catch the resemblance and not subject you to the embarrassment of having your friends ask if your picture represents an apple or an onion. After you have practiced your eyes and hand in picturing single objects, you can group them. Use only soft, white paper and a soft, black pencil. This material is so cheap you can afford to spoil vast quantities of it, and learn by many efforts. It is not easy to explain why one can get so much pleasure out of trying to draw, but one can, and it is a simple, hearty and harmless enjoy-

ment, which all persons should be encouraged to cultivate.

KATE KAUFFMAN.

APRONS.

We give our readers two very pretty apron patterns. One is made of fine embroidery tucked at the waist, and bretelles of embroidery forming the bib. The other is of fine bosom linen, trimmed with bands of pink and bretelles of pink. Zephyr gingham can be had in pink that will not fade.

When making the summer dresses, it



APRON.

would not take long to piece a block for each daughter, of her dress, nicely put the date in one corner, and lay it away in her "hatching chest." In this way each girl's outfit will gradually assume proportions, and the memory quilt will not be so homely if made of her own dresses. We give two neat patterns, and easy to cut.



APRON.

The light parts can be of very light calico, but should be all alike in one block.

The Roman embroidery is a very pretty and durable edge for doilies, using the narrow for the small doilies and the wide for the centerpiece. CHRISTIE IRVING.

DRESS NOTES.

At no time for many years have children's dresses been as pretty and as easy of construction as this season. The fabrics, in color and quality, are very beautiful, so no one can be at a loss what to buy. There are lovely effects in all the tan shades, and some shades of green bid fair to be very popular. Gray in all its shades is a favorite color. Combined with apple-green in small quantities or pale shrimp-pink, very charming effects can be produced.

A princess suit of gray, made in one piece, with cordings of green velvet, a hat trimmed with gray and piped with green, makes an attractive suit for a brunette with a good deal of color. Or, a solid, light-gray suit, worn with an entirely black hat and black gloves, would be more suitable for a blonde, with rather a Titian shade of hair.

Having a good, black skirt, for a waist substitute a guimpe of black surah,

with yellow sleeves and yellow yoke and plaited finish about the neck; this, with a big black hat simply trimmed, is an attractive suit for a small girl.

Avoid all overtrimmed hats for little girls. Use a simple wreath of flowers, a feather band or a couple of silk ties simply twisted and made into a few upright bows at the back, which can be stiffened with cap wire if desired.

As long as it is becoming, use the simple, white Swiss caps for your little girls. Nothing can take the place of it for heightening the infantile beauty of a baby face. At all times and in all places they are more convenient than a large hat.

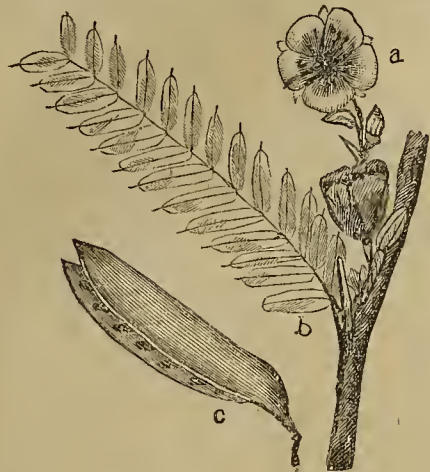
L. L. C.

FLORAL SERIES ANSWERED.

CASSIA CHAMÆCRISTA.—What is the name of the plant enclosed, and has it any value as a food for cattle?

Sussex county, Del. JAS. H. MAULE.

REPLY:—The plant is *Cassia chamæcrista*. It belongs to the Leguminosæ,



CASSIA CHAMÆCRISTA.
A, flower; b, leaf; c, seed-pod.

an order which includes the clover, pea and many other plants prized for feeding purposes. As to the value of this plant for feeding cattle, we are not prepared to give an opinion. The plant grows from twelve to eighteen inches high, has compound leaves with obtuse, mucronate leaflets, as shown in the sketch, and persistent, all-shaped stipules. The flowers are borne in clusters at the leaf axils, are yellow, with five long, narrow sepals, five broad, wedge-shaped petals, ten stamens opening at the edge to discharge the pollen, and a long, slender, crooked style. The seed-pods are straight and flat, as indicated in drawing.

WEEDS NAMED.—Enclosed you will find three weeds. Two of them came with some Pearl millet seed, which I sowed some two years ago. The millet was a failure, but these weeds were there, and only them. No. 1 grows three feet, No. 2 two feet six inches and No. 3 eighteen inches high. They are all seedling, and will yield a very prolific crop this year, and I wish to know if they are of any use in feeding stock. When No. 1 first appeared I thought it was dandelion by its growth and taste until it ran up. Nos. 1 and 2 are strangers here; No. 3 is a native.

Ophir, Wash. J. B. WATSON.

REPLY:—No. 1 is *Mulgedium acuminatum*, commonly known as false or blue lettuce. The accompanying sketch was made from the specimen received, and



FIG. 1. FIG. 2. FIG. 3.

FALSE LETTUCE—MULGEDIUM.

Fig. 1. Flower closed—natural size.
Fig. 2. Upper leaf—about one third natural size.
Fig. 3. Cypsel (seed), with silky pappus—enlarged.

from it any farmer can identify this weed. The lower leaves are runcinate, or cut like the dandelion, to which it is closely related, but the upper are smooth-margined, as shown. The seed is very small, flat, and contracted into a short neck,

which supports a broad disc, covered with pure white, silky hairs.

No. 2 is *Primula biennis*. The flowers are borne in bracted terminal spikes, of which a bract and flower are represented in Fig. 1. The petals (a) are broad, as long as the drooping, greenish sepals (b), and both are supported by a long tube (c), two or three times as long as the seed-pod (d). Both stem, foliage and seed-pods are covered with short, whitish hairs, giving the plant a light green color.

No. 3 is probably a species of *Potentilla*, but as there were no flowers sent with the plant, it could not be determined. Specimens for name should always include flowers and leaves, and when possible, the roots, stem, leaves, flowers and fruit should be sent.

The utility of these weeds is doubtful. Certain varieties of the primrose bear large flowers, and are cultivated for ornament; but the common, or typical sort, will grow and bloom by the wayside, where cows can be seen daily cropping it. They do not seem to relish it. The Mulgedium, like the dandelion and lettuce, doubtless contains a modicum of opium, which might be stimulating, if eaten, but from its coarse nature, it is not likely to be relished by stock.

GEORGE W. PARK.

HER YARD OF ROSES.

Everyone possessing the beautiful picture described below will be interested in the following from the *New Orleans Picayune*:

"It is agreeable for a woman to realize that she is valuable as an investment, that hard-headed business men feel that she is worth taking stock in, as it were. There is no dispute as to merit when the eloquence of money is on its side. About six years ago, says the *New York Sun*, a young woman came to this city to tempt fortune, as many other women have done. She had been taught to use colors as a school-girl, and had accordingly set up a studio in Denver, where she practiced for several years what she thought was art. Meanwhile she studied, spending a whole day, perhaps, trying to paint a single rose, and wiping away the tears between failures. Then she came here, where she wanted to paint and to study, but she knew that if she couldn't paint she at least could sew, and if there were no sewing there would be something else she could do. But in the distance there was always an easel at which she sat. So she set up a studio, and there were many trials and discouragements, but always hope. One day she had a happy inspiration born out of a certain strip of canvas she happened to have. On this she strung long roses and sent it to the Academy of Design as 'A Yard of Roses.' The title was as fortunate as the arrangement. It attracted attention and, better, brought in orders. Last year the painting fell into the hands of a newspaper that had it lithographed and sent broadcast throughout the country. The end of the story is that a large combination of lithographers think there is money enough in this young woman's brain and fingers to send her to Paris to study, and while she realizes the dream of her life, they will have the profits of her brush. Her passage is taken. She sails this month."

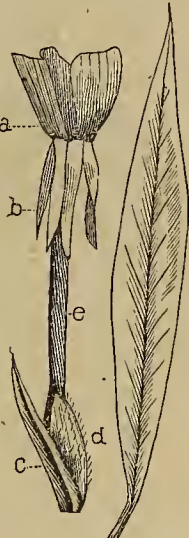


FIG. 1. FIG. 2.
EVENING PRIMROSE—
CENOTHEA.

Fig. 1. Flower, ovary and bract. a, petals; b, drooping sepals; c, leaf bract; d, ovary, or seed-pod; e, tube.
Fig. 2. Leaf reduced.

HOME TOPICS.

MOVING.—After six years of life in a large city, we are again in the country, or at least in a little suburban village where we have our own garden and fruit, to say nothing of flowers; and every day we say: "Oh, isn't it nice to be in the country again?" Although the "gude mon" still goes into the city at eight o'clock in the morning and back at five, yet he can point with pride to a flourishing garden, where he is trying the effect of evening instead of morning culture.

But I started to tell about moving. A

farmer came in with big wagons to carry the furniture, which we marked for the room into which it was to be put. In the same way every box and barrel was marked with its contents, as far as possible. This saved much time and trouble in arranging the new home. Another thing I have learned about moving, in the last few years, is to make a number of large, strong bags, and put bed-clothes, pillows, curtains and everything else possible into them. They are easily handled, pack in nicely between pieces of furniture, and add little to the weight. The man who packed the loads was much pleased with the bag idea, and said he had never been able to put so much on a wagon before, for the bags would fit in anywhere and seemed to take no room.

GREEN PEAS.—Peas that have been picked, carried to market and exposed for hours, sometimes even days, before they reach the consumer, are a very different and inferior vegetable compared with peas shelled as soon as picked and cooked as soon as shelled. They should be put into boiling water enough to cover them, kept boiling until they are tender and not a minute longer. Add salt when the peas are nearly done, and season with butter and pepper; half a teacupful of cream may be added, and a teaspoonful of flour rubbed into the butter. I remember my mother used to scrape small, new potatoes, boil them with the peas and serve together with this cream dressing. If you have peas left from dinner, make pea fritters for breakfast. Mash a pint of boiled peas and add three eggs, beaten very light, a teacupful of milk and prepared flour to make a batter stiff enough to fry on a griddle, like pancakes. We like them even better than green corn fritters.

THE CELLAR.—A cellar which is damp soon becomes moldy, and an unfit place to keep milk, butter or other articles of food. If a cellar is properly made, drained and ventilated, it ought to be sweet and dry. Instead of keeping the windows open day and night for ventilation, have them made so they can be closed before sunrise and only opened after the air has grown cool at night. If the air is admitted during the day, it is warmer than the air in the cellar, and the moisture it contains will be condensed by contact with the cool air and walls of the cellar. A box containing fresh lime, put in the cellar, will help to make it dry by absorbing the dampness.

MAIDA McL.

"YANKEE DOODLE."

Every patriotic American loves the jingling tune of "Yankee Doodle," but no one seems to know just how or when it first began to be used. It is ever so much older than the Declaration of Independence, and is said to have been originally written in Greek—"Iankhe Doule," meaning "Rejoice, O Slave!" or "Let the Slave Rejoice." The Greek words certainly sound, pronounced English fashion, enough like "Yankee Doodle" to make this belief a reasonable one. All sorts of queer verses have been sung to the jumping, frolicsome tune, and in the time of King Charles I, a number of dog-

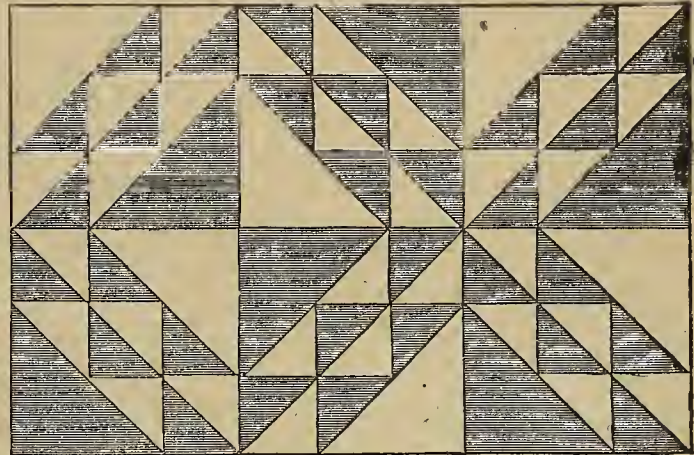
geral verses which ridiculed Cromwell were sung to it. The opening verse,

"Yankee Doodle came to town
Upon a Kentish pony;
He stuck a feather in his hat,
And called him macaroni,"

is almost the same as one of those still sung to the national air. Besides this, an old English nursery rhyme also claims the tune, and this was a great favorite with the little ones. There was something altogether delightful in the rapid jingle:

"Lucy Locket lost her pocket,
Kitty Fisher found it;
Not a bit of money in it,
Only binding 'round it."

Pockets in those days were bags put on outside of the dress, or this accident could

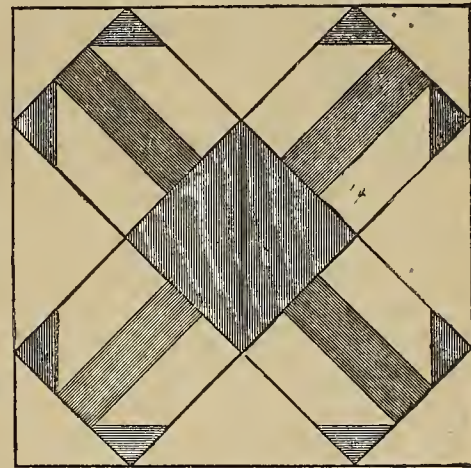


QUILT PATTERN.

not have happened. Let us hope that Miss Locket was more careful after this experience, and that she finally had "a bit of money in it," too. The tune used to be called "Kitty Fisher's Jig," and this Kitty was a real person and a famous beauty in the reign of Charles II. It is a much-disputed tune, and has been claimed for France and Spain, while in Holland it is said that when the laborers were paid for their work "as much buttermilk as they could drink and a tenth of a grain," they sang, to the air of "Yankee Doodle,"

"Yankee dudle, doodle down,
Diddle, dudle, lanther,
Yankee, biver, boover, bowen,
Botermilk und tanther."

It came to America through England, and was given as a national air by a British surgeon in the French and Indian war. This was more than twenty years before the revolution, and compared with the uniform and well-drilled regular troops, the colonial regiments presented so ridiculous an appearance that "Yankee Doodle" seemed just the thing for them. They did not mind the ridicule, and laughed at the tune themselves; but they liked it from the first, and when it became twisted up with the stars and stripes,



QUILT PATTERN.

nothing could induce them to part with it. "It is the blood of their political life, and you might as well attempt to rob them of Bunker Hill, or of the memory of Washington, or of the stars and stripes themselves, as of this dear old clinking, slattering, right-about-face, defiant battle march."—*Harper's Young People*.

Send for free trial package of soap as offered on page 13. You need not heat up your house by boiling the clothes and the fuel saved pays for the soap. The trial package is sent free.

FREE

For 30 Days. Wishing to introduce our CRAYON PORTRAITS and at the same time extend our business and make new customers, we have decided to make this Special Offer: Send us a Cabinet Picture, Photograph, Tintype, Ambrotype or Daguerotype of yourself or any member of your family, living or dead and we will make you a CRAYON PORTRAIT FREE OF CHARGE, provided you exhibit it to your friends as a sample of our work, and use your influence in securing us future orders. Place name and address on back of picture and it will be returned in perfect order. We make any change in picture you wish, not interfering with the likeness. Refer to any bank in Chicago. Address all mail to THE CRESCENT CRAYON CO. Opposite New German Theatre, CHICAGO, ILL. P.S.—We will forfeit \$100 to anyone sending us photo and not receiving crayon picture FREE as per this offer. This offer is bonafide. When you write, mention this paper.

PETROLEUM VASELINE JELLY.

—AN INVALUABLE FAMILY REMEDY FOR—

Burns, Wounds, Sprains, Rheumatism, Skin Diseases, Hemorrhoids, Sun Burns, Chilblains, Etc. Taken Internally, Will Cure Croup, Coughs, Colds, Sore Throat, Etc.

PURE VASELINE (2-oz. bottle).....	10 cts.	VASELINE SOAP, Unscented.....	10 cts.
POMADE VASELINE (2-oz. bottle).....	15 "	VASELINE SOAP, Perfumed.....	25 "
VASELINE COLD CREAM.....	15 "	WHITE VASELINE (2-oz. bottle).....	25 "
VASELINE CAMPHOR ICE.....	10 "	CAMPHORATED VASELINE (2-oz. bottle).....	25 "
		CARBOLATED VASELINE (2-oz. bottle).....	25 "

FOR SALE EVERYWHERE AT ABOVE PRICES.

Be careful to accept only the genuine, put up and labeled by us, if you wish to receive value for your money. If any dealer offers you an imitation or substitute, decline it. DO NOT BE CHEATED.

CHESEBROUGH MANUFACTURING COMPANY.

Our Sunday Afternoon.

'TIS THE BREAK OF DAY.

When the sound of coming judgment
Falls on many a startled ear,
And a voice is on the mountains,
"Lo, the Bridegroom draweth near!"
When earth's bravest sons are quaking,
And the world's foundation shaking,
Christian, ride at anchor,
'Tis the break of day.

TO-MORROW?

Strength for to-day is all that we need,
As there never will be a to-morrow;
For to-morrow will prove but another to-day,
With its measures of joy and sorrow.

Then why forecast the trials of life
With such sad and grave persistence,
And wait and watch for a crowd of ills
That as yet have no existence?

Strength for to-day; what a precious boon
For earnest souls who labor,
For the willing hands that minister
To the needy friend or neighbor.

Strength for to-day, that the weary hearts
In the battle for right may quail not,
And the eyes bedimmed by bitter tears
In their search for light may fail not.

Strength for to-day on the down-hill track,
For the travelers near the valley,
That up, far up on the other side,
Ere long they may safely rally.

Strength for to-day, that our precious youth
May happily shun temptation,
And build from the rise to the set of the sun
On a strong and sure foundation.

Strength for to-day in house and home,
To practice forbearance sweetly;
To scatter kind words and loving deeds,
Still trusting in God completely.

HOME AT LAST.

BYOND the setting is the rising sun and coming day. Beyond the darkness is the light. Beyond the storm is the calm. Beyond the earthquake's fiery throb are green fields and smiling skies. The coffin and the shroud are often separated but a little way from the bridal scene, with garlands and music. The road may be long and weary, but it will have an end; the voyage tedious and anxious, but land is reached at last. All things change; the seal of every mystery shall be broken. All griefs will end, all tears be dried, all sighs shall cease. The weary and sad-hearted shall lift up their heads and sing; their hands shall clasp the latch on the eternal door that leads into the sorrowless home. In happy crowds they shall gather, on the crystal sea, shining and angelled.

I see them to-day, all over the plains of earth; the big, unbidden tears are stealing down the furrowed cheek. These have their silent eloquence, and tell of griefs unspoken and that break the heart. Lo, it is the night of sorrow, and all the world is dotted with broken hearts. But the star of hope beckons even these, and they pass on their way. And now they hear the echoes of the trump of jubilee. They have climbed the last hill and are come in sight of the plain along which the King and his retinue shall pass and lead them homeward. In sight of the everlasting doors of the city of gold, they give one loud, long, lingering shout, Jerusalem! Jerusalem! Lo, they are shut in forever! Home at last, home at last!—*Messiah's Herald.*

VALIANT FOR THE TRUTH.

The prophet Jeremiah made complaint of ancient Israel that they were "not valiant for the truth." At the present day we have the same kind of people in the church. The champions of error stalk broadcast through the land, while upholders of the truth are few and far between. A popular lie is believed sooner than an unpopular truth; hence, the defendant of error has an easy time. He is received with open arms, while vast multitudes flock to his support; consequently, he has all needed means to carry on his work. New adherents spring up on every side, and success seems to crown all his efforts. Not so with the valiant defender of truth. He meets with opposition from every side. His former friends become cold and distant and treat him with disdain. Those who uphold and support him are few and feeble. His means for carrying on the contest are meager. New recruits are of rare occurrence, while desertions are quite frequent. Knowing as he does that popularity does not change error into truth, or make wrong right, he seeks

to root out error by planting truth in its place.

Oftentimes when in valiant defense of the truth, he looks for help from those who profess to love the cause he defends, and is told by them that he is too radical and stiff about the subject, and he must tone down a little if he ever expects to get any one to hear him. They advise him to compromise the matter and to relegate important Bible facts to the list of non-essential doctrines. They tell him he must not be so set in his ways if he ever expects to win any one over to his way of thinking. They cheerfully inform him that the surest way to get a man to change his faith and believe as you do is to never mention what you believe, nor say anything against his belief, as it really does not make any difference what one does believe.

Men may laugh and jeer at the valiant defender of God's truth and set him down as a crank, a croaker, an alarmist, a disturber of the peace, a hot-headed radicalist, but God's eyes are on him, and on the great reckoning day he will stand justified before the vast throng, while the weak-kneed, milk-and-water, effeminate compromisers will stand condemned before the judge whose "eyes are upon the truth."—*Messiah's Advocate.*

WHAT A POWER!

It is said that "one pound of gold may be drawn into a wire that would extend around the globe." So one good deed may be felt through all time, and cast its influence into eternity.

What, one good deed clothed with such influence? Yes, a deed that the humblest Christian, even a little child, can perform, may set a wave of influence in motion that will go careering through time, touching many lands, and sweeping over the boundary line of earth, pour the wealth of its accumulations into the realm eternal.

You need not perform any great achievement, such as will hold the world in mute astonishment; one little act, a word fitly spoken, or even the glance of a loving eye, may roll many sheaves into the garner of the Lord, and swell the anthems of immortality.

The thing is to do the little deed at the right time, in the right spirit, and with the grip of faith upon the omnific arm. You must have the eye to discern the opportunity and the hand be stretched forth to obey the call. If you cannot be a pound of gold drawn into a wire to girdle the globe, what there is of you let it be pure gold, contributing to the glory of Christ's kingdom.—*Christian Standard.*

THE INFIDEL AND THE MINISTER.

A very learned minister preached a series of sermons on infidelity for the benefit of a very learned man in his church. There were some seven sermons, and he rendered them to his entire satisfaction. Soon after he got through the infidel came to him and said he was a Christian and accepted the Lord Jesus Christ. He was very much gratified. He took all the credit to himself. After it was all talked over, he said:

"Now, my dear friend, will you tell me which of my lectures it was that convinced you?"

He said: "Sir, it was not any of your lectures. It was that poor, hobbling, colored woman, who, when she came out, would mutter among her tears, 'O, my precious Savior, my precious Savior, I could not live without you!' and I watched that woman and saw that it came right straight from her heart. I did not hear all that you said, but I was deeply attracted by what she said, and convinced."—*Christian Alliance.*

Better Than Forty-Dollar Pictures.

PHILADELPHIA, PA., June 20, 1892.
I am more than delighted with the beautiful oleograph, "Columbus at the Royal Court of Spain." I am taking orders very fast and will order all I can raise the money for. I know there is no risk to run as far as selling them is concerned. It throws pictures in the shade that cost as high as Forty Dollars. The frame is grand and just suits the picture.
ISAAC E. NEWTON.

A Telegram.

BRACEVILLE, ILL., June 22, 1892.
Send six more order-books at once. The picture sells well.
J. P. CUMMING.

Since we commenced printing this issue, a number of cheering letters like the above have reached us. Read the wonderful offer on page 9 and act at once.



NEW ENGLAND CONSERVATORY

Founded by Dr. Eben Tourjee. **OF MUSIC.** CARL FAELTEN, Director.
Music, Elocution, Fine Arts, Literature, Languages and Tuning. A safe and inviting home for lady pupils. Send for Illustrated Calendar.
FRANK W. HALE, Gen'l Manager, Boston, Mass.

Asthma The African Kola Plant, discovered in Congo, West Africa, is Nature's Sure Cure for Asthma. Cure Guaranteed or No Pay. Export Office, 1161 Broadway, New York. For Large Trial Case, FREE by Mail, address KOLA IMPORTING CO., 132 Vine St., Cincinnati, Ohio.

A LOT FREE In order to advertise Cascade City, Washington and that you may become thoroughly acquainted with the great possibilities of this growing city, send for our printed matter, which we mail you free. To each of the first one hundred persons sending us their names we will give free a full warranty deed to one lot, 25x100 feet. Address: STATE OF WASHINGTON LAND CO., 119 La Salle Street, CHICAGO, ILL.

HARTSHORN'S SELF-ACTING SHADE ROLLERS
Beware of Imitations.
NOTICE OF AUTOGRAF OF STEWART HARTSHORN AND GET THE GENUINE HARTSHORN.

TOKOLOGY, a complete Ladies' Guide in health and disease. Lizzie N. Armstrong writes: "If I knew I was to be the mother of innumerable children it would have no terrors for me, so great is my confidence in the science of TOKOLOGY." Prepaid, \$2.75. Sample pages free. Best terms to agents.
Alice B. Stockham & Co., 277 Madison St., Chicago.

Buy **WALL PAPER** By Mail
Your **AT WHOLESALE PRICES**

Handsome New Designs, 3c a roll.
Beautiful Gilt Papers, 5c a roll.
Elegant Embossed Gilt Papers, 8c a roll.
4 to 9 inch Borders, Without Gilt, 1c a yard.
4 to 18 inch Borders, With Gilt, 2c and 3c a yard.
Send 8c to pay postage on over 100 samples.
Address F. H. CADY, 505 High St., Providence, R. I.
Mention this paper.

DEXTER \$1.50
"A dollar saved is a dollar earned." This Ladies' Solid French Dongola Kid Button Boot sent, prepaid, anywhere in the U.S., on receipt of Cash, Money Order, or Postal Note, for \$1.50. Equals every way the boots sold in all retail stores for \$2.50. We make these boots ourselves, therefore we guarantee the fit, style and wear and if any one is not satisfied we will refund the money or send another pair. Common Sense and Opera Toe, widths C, D, E, & EE, sizes 1 to 8, in half sizes. Send your size; we will fit you. We deliver Free. Catalogue Free.
DEXTER SHOE CO., 143 Federal St., Boston, Mass.

BROWN'S FRENCH DRESSING
—FOR—
LADIES' SHOES.
SOLD EVERY WHERE.
B. F. BROWN & CO., Boston, U.S.A., M'f'rs.

Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.

There is **NO SURE CURE FOR EVERY CASE OF ASTHMA** or **EVERY CASE OF HAY FEVER**, but the worst cases, if uncomplicated by organic disease, can be **CURED TO STAY CURED** by constitutional treatment, and this at the patient's home.
ASTHMA AND HAY-FEVER
We treat no one without a thorough knowledge of the case.
Incurable Cases Declined.
Examination free by mail.
We want name and address of every sufferer from Asthma or Hay Fever.
P. HAROLD HAYES, M. D., BUFFALO, N. Y.

Kennedy's Medical Discovery

Takes hold in this order:

Bowels, Liver, Kidneys, Inside Skin, Outside Skin,

Driving everything before it that ought to be out.

You know whether you need it or not.

Sold by every druggist, and manufactured by **DONALD KENNEDY, ROXBURY, MASS.**

GOLD PLATED WARRANTED GENUINE. **ONE YEAR TRIAL FREE**
A watch that cannot stand the test is dear at any price. We send with this watch a printed agreement giving you the privilege of returning the watch at any time within ONE YEAR if it does not give perfect satisfaction in every respect. We are the only firm in the world that sell goods on such liberal conditions and can show thousands upon thousands of testimonials from every state in the Union. The case is hunting style, double case and double plated, superbly engraved and decorated and fitted completely with our richly jeweled and celebrated movement, guaranteed a perfect time keeper.
Cut this out, send it to us with your name and express office address, and we will send it there by express for your examination. If after examination you are convinced that it is a bargain pay the agent \$4.95 and express charges and it is yours; write to-day this will not appear again. Address: **THE NATIONAL MFG. & IMPORTING CO., 334 Dearborn St., Chicago.**
18K
Mention this paper when you write.

A BONANZA INVESTMENT.
What are you doing with your money? Does it earn you more than 12 per cent. per annum? Do you want to make more money than ever before? If so, the stock of **The Black Wonder Gold & Silver Mining Co.**, of Sherman, Hinsdale County, Colorado, offers this opportunity to small as well as large investors.
Price of stock materially advancing every month, and as a dividend payer, is destined to equal the Ontario and Mollie Gibson Mines which pay monthly dividends of from 25 to 50 cents per share.
The Black Wonder Mine has produced marvellously rich ore, assaying in gold and silver as high as \$17,341.10, and out of a total of 135 assays averaged per ton over \$484.
Legitimate mining investments, such as the Black Wonder, pays larger returns than any other business on earth. Stock bought now will double in a short time.
Write to-day for free prospectus, endorsements and full particulars regarding this BONANZA INVESTMENT, to **JOSEPH H. ALLEN, Treasurer, The Black Wonder Gold and Silver Mining Co., 244 WASHINGTON ST., BOSTON, MASS.**
Mention this paper when you write.

You need work.
(If not this adv. does not interest you)
You can make \$75 to \$250 a month, provided you work with a little vim, vigor, pluck and push.
We have got something new. It costs nothing to investigate. Must have a live, wide-awake representative in your community, either man or woman at once. All information cheerfully sent by return mail. Better write to-day. Address in full, **THE STANDARD SILVERWARE CO., ORDER DEPT. 501 BOSTON, MASS.**
Mention this paper when you write.

LOOK HERE.
Do you use lamps? Our patent attachment improves the light, avoids dirty work in filling, saves time and money. You need it. All housekeepers need it. Samples free; and Gold Watch premium to first each week. Write at once. Agents wanted. Good pay; steady work. 3 months subscription to Monthly Journal for 50c. Stamp, **J. Bride & Co., Nassau St., New York, N.Y.**

If afflicted with sore eyes use **Dr. Thompson's Eye-Water**

Our Miscellany.

If the cow could talk, no doubt she would be heard all over the land, calling for an improved breed of dairymen that would give her better care.

AN OPPORTUNE FRIEND will be found in Dr. D. Jayne's Expectorant, when racked by a severe Cold, and the many Lung or Throat affections which sometimes follow. This old remedy has met the approval of two generations, and is to-day as popular, safe and effective as ever.

MRS. GIBBS—"Look at the dust on those window-drapes, Bridget. I don't believe you have touched them for a month."

Bridget—"Thet I heven't, mem; I wuz afraid o' breakin' 'em. Do yez suppose Oi don't know china silk when Oi see it?"—*Kate Field's Washington.*

THE Columbian exposition is deriving quite a revenue from the visitors whose curiosity prompts them to see the grounds and the wonderful buildings now approaching completion. An admission of twenty-five cents is charged, and on single days the number of visitors has exceeded 14,000, and a considerable increase is expected. Without exception, all are enthusiastic in their admiration and wonder at the magnificent spectacle.

THE plan of the exhibit which Ohio will make of its school system at the Columbian exposition has been adopted by the commissioners, and embraces the following: 1. Manuscript work, essays, etc. In this selection exhibits will be held in each county-seat. Four divisions will be represented—the work of subdistrict schools, graded schools of villages, same of cities, night schools. County exhibits will be in charge of a committee composed of the institute committee and two persons selected. From the work on exhibition the committee will select fifty of the best manuscripts in each branch and forward to the public school commission. 2. Maps, showing location of each school-house in the state; cost of education in each county; relative number of pupils in country, town and city; schools for past forty years; relative number of pupils in primary, grammar and high schools for the past forty years. 3. Picture albums of schools, buildings, etc. 4. History of organization and development of Ohio's school system shown by laws. 5. Text-books arranged to show old and new.

THAT impartial non-partisan and unpolitical British-American journal, *The Review of Reviews*, says: "The reciprocity policy is upon the most rigid lines of protection, and bears not the faintest resemblance of the free-trade policy. Protectionism declares that ordinary articles of consumption that we do not and cannot well produce should be admitted free. The reciprocity idea is that the countries from which these articles come should in return allow our wares—those which do not conflict with their home products—to enter their markets with special exemptions. The whole system is one designed to encourage our industries and foster our commerce. The free-trade system would arrange tariffs and levy taxes with the sole purpose of providing the necessary public revenue, and would keep hands off of industry and commerce, leaving all those matters to private volition."

THE southern states will be well represented at the Columbian exposition, notwithstanding only a few of them have made appropriations for that purpose. Texas has already provided a fund of \$225,000 and is vigorously pursuing a plan which, it is believed, will result in increasing the amount to \$1,000,000; it has contracted for a \$100,000 building. Kentucky has an appropriation of \$100,000, and will erect a handsome building. Florida is confident of raising \$200,000, and will reproduce at Chicago old Fort Marion for its headquarters. Arkansas is raising \$40,000, and with apparent success, for it has contracted for the erection of an \$18,000 building. In Alabama the women have undertaken to raise \$10,000 or \$15,000. The legislature of Louisiana, now in session, is petitioned to appropriate \$50,000. Mississippi refused to appropriate, and declined to allow counties and cities to tax themselves in order to make an exhibit; private enterprise, however, may yet save the credit of the state at the exposition. West Virginia has an appropriation of \$40,000, and will expend half of it on a building. In Tennessee, county appropriations and private subscriptions are relied upon for the funds necessary for the state's representation. The North Carolina legislature appropriated \$25,000, and the state board of agriculture has provided about \$10,000 more; an additional appropriation is hoped for, and \$10,000 from subscriptions is expected for a building. Virginia has an appropriation of \$25,000, and is trying to raise \$50,000 by subscription; a \$12,000 building will be erected. Georgia is raising \$100,000, and proposes to put up a \$50,000 building. Maryland has \$60,000, and will spend half of it on a building. The Columbia board of trade is engaged in raising \$75,000 for South Carolina's representation, and the next legislature will be asked to appropriate a like amount. Thus the South is planning to spend about \$2,000,000 upon its representation at the great fair. Reports indicate that in nearly all of these states the work of collecting and preparing exhibits is progressing satisfactorily, and that among the people the interest in the fair is universal.

LOOKING AHEAD.

Isaac—"Rebecca, led's ged married ride away quick."

Rebecca—"What you in such a hurry, Ikey?"

Isaac—"Der sooner ve marries der sooner comes dot golden wedding, ain't it?"

COULDN'T FORGET HIM.

Waiter (as Moodles is about to leave)—"Ahem, sir! It is customary, sir, for patrons to—ahem!—to remember the waiter, sir."

Moodles—"Oh, never fear! I shall not forget you in a hurry. How could I when we have been together so long? It seems ten years since I gave my order."—*Harper's Bazar.*

EVERYTHING PACKED UP.

Two little boys had been making a visit, and on the morning of their departure their father said to the elder:

"Dick, why is your hair so rough?"

"I couldn't smooth it, papa. I've packed my comb."

"And from the state of your hands I conclude you must have packed your nail-brush, too."

"Yes, papa, last night."

"I guess he must have packed up his prayers, too, chimed in the younger brother, "cause he didn't say 'em last night or this morning."—*Youth's Companion.*

One dollar and fifty cents is all the capital you need to start in a pleasant business that will give you a greater income than many storekeepers make with five thousand dollars capital. See our great offer on page 9.

THREE MONTHS FREE! THE HOUSEWIFE —AND— A Beautiful Present! ALL SENT FOR 10 CENTS



For only 10 cents to cover cost of postage and mailing we will send you

1 Bulb Freesia, for winter blooming, originally discovered at the Cape of Good Hope; grown in many English gardens; a very handsome plant.

1 Package Thunbergia Seeds, mixed shades, a genus of very handsome climbing plants.

Also, THE HOUSEWIFE on trial for 3 months. A most delightful ladies' magazine. Each number containing from 24 to 32 large four-column pages, bound in an artistic cover. THE HOUSEWIFE gives more for the money than any other publication. It contains with the most delightful stories. It instructs by answering questions on all subjects interesting to its patrons. The most gifted writers in all the departments of social life. We cannot begin to tell you about it in this advertisement. One woman expresses it when she writes to us, "Each number is so much better than the preceding I do not know what you will do by and by." Everything pertaining to woman's work and woman's pleasure will be found in its pages, treated by such writers as:

ELIZABETH STUART PHELPS, MARION HARLAND,
ROSE TERRY COOK, HARRIET PRESCOTT SPOFFORD,
MARY LOWE DICKINSON, MARY KYLE DALLAS,
ELIZA C. A. ATWOOD, MARY A. DENISON,
ABBIE M. GANNETT, CORA STUART WHEELER,
LUIS C. LILLIE, and OTHERS.

Every department in charge of a special editor. Every article contributed expressly for THE HOUSEWIFE by the best talent obtainable. Every lady reader of this advertisement can obtain THE HOUSEWIFE on trial 3 months and a splendid present of a bulb and a package of flower seeds, as described above, by sending 10 cents to pay the postage. We charge you nothing for the magazine or presents, the 10 cents is for postage and mailing only.

GET UP CLUBS.—Ask your friends to subscribe. For a club of 5 we will give the sender of Club 1 Bulb Glory of Snow, praised by all as one of the most exquisite of spring flowering plants; also for winter blooming in the house and out flowers; 1 Bulb Ixia, exceedingly attractive, bearing spikes of large showy flowers; various in color. For a Club of 10 we will give the sender of club 1 Bulb Glory of Snow, 1 Bulb Ixia, 1 Package Seeds, Primula Sinensis, Fern Leaf, retails at 50 cents by leading florists. For a Club of 15 we will give to sender of club 3 Bulbs Roman Hyacinthus, 1 each red, white and blue. For a Club of 20 we will give to sender of club 1 Bulb Spotted Calla (see illustration); 1 Bulb Allium Neapolitanum, bearing pure white flowers; 1 Bulb Ixia. For a Club of 25 we will give to sender of club 2 Bulbs Glory of Snow, 2 Bulbs Allium Neapolitanum and 5 selected winter flowering plants.

Remember every subscriber will receive THE HOUSEWIFE for 3 months and 1 Bulb Freesia and 1 Package Thunbergia Seeds (mixed shades). All for only 10 cents. Write at once to

THE HOUSEWIFE, 81 Warren St., New York.

Mention where you saw this advertisement.



THIS MACHINE \$12 TRIAL FREE

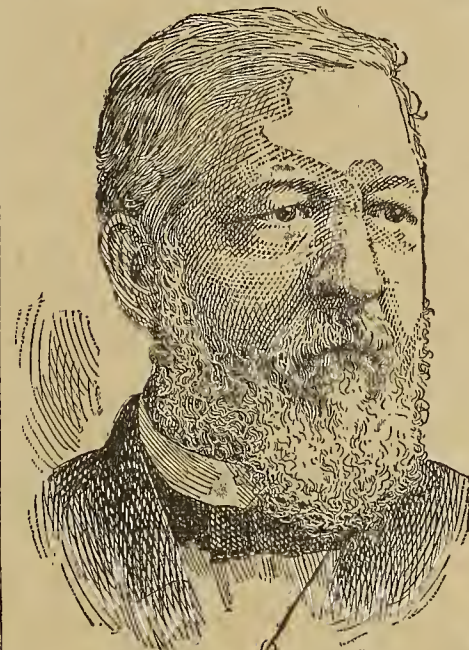
You can give the machine a thorough test before sending us one cent. All attachments free. Every machine warranted five years. For catalogue, full particulars, etc., cut this adv. out and send to us to-day. Alvah Mfg. Co., Chicago, Ill.

PARTIAL DEAFNESS. DISCS. The SOUND cannot be helped a larger per cent. of cases than all similar devices combined. The same to the ears as glasses are to the eyes. Positively invisible. Worn months without removal. H. S. WALES, BRIDGEPORT, CONN.

AGENTS WANTED for Lives of Harrison and Reid by Gen. Lew Wallace and Hon. Murat Halstead. Enormous sales. Send quickly 25 cents for canvassing outfit. D. P. Olcott, 9 West 14th St., N. Y.

FOR SUMMER COMPLAINTS PERRY DAVIS' PAIN-KILLER BEST MEDICINE IN THE WORLD.

FREE during July and August.—Send us at once a photograph or a tintype of yourself, or any member of your family, living or dead, and we will make for you one of our finest \$25.00 life-size CRAYON PORTRAITS absolutely free of charge. This offer is made to introduce our artistic portraits in your vicinity. Put your name and address back of photo, and send same to Tanqueray Portrait Society, 741 DeKalb Ave., Brooklyn, N. Y. References: Rev. T. DeWitt Talmadge, all newspaper publishers, Banks, and Express Companies of New York and Brooklyn.



AGENTS WANTED FOR A GRAND NEW BOOK

Hon. Jas. G. Blaine.

Four Complete Books in One Magnificent Volume of

NEARLY 900 LARGE QUARTO PAGES!
OVER 400 SPLENDID ENGRAVINGS!

Book 1.—"A Review of Our Country," by Hon. Jas. G. Blaine, *Secretary of State.*

Book 2.—"A New Life of Columbus," by J. W. Buel.

Book 3.—"A Complete History of America," by John Clark Ridpath, LL.D., *the first historian of the century.*

Book 4.—"A Complete History and Description of the World's Exposition at Chicago," by Hon. Benjamin Butterworth, *Secretary and Solicitor-General of the World's Fair Association.*

This Great Work is Now Ready.

Its sale during the next two years will be three-fold greater than that of all other subscription books. Experienced agents will recognize in it at first sight the best opportunity to make money that has been offered them in five years. Send at once for descriptive circulars and terms; also information in regard to our

FREE TRIP TO THE WORLD'S FAIR.

Or, better still, send \$1 for agents' complete outfit and get started a week earlier, as every day saved will mean from \$5.00 to \$10.00 in pocket. Address

MAST, CROWELL & KIRKPATRICK, Springfield, Ohio.

MIDSUMMER READING.

Grandest Bargains Ever Offered

10 NEW BOOKS By the Most Popular Writers of the Day **FREE**

To any person sending us only 5 new subscribers to this paper at 50 cents each.

The sale of many of these books has heretofore been confined to the stores, where they are sold in bound form for \$1.00 to \$1.25. They are printed in good, clear type and strongly bound in heavy paper covers. This is the greatest opportunity of a lifetime to secure these valuable books for almost nothing. See this list of writers:

Geo. Ebers, Bertha M. Clay, M. E. Braddon, Nathaniel Hawthorne, The Duchess, Chas. Kingsley, R. L. Stevenson, Stepniak.

Most Interesting Books Ever Written.

No. 841. *Blind Love*, by Wilkie Collins. Interesting, as is everything from the pen of this noted author. He needs no introduction to our readers.

No. 842. *Lady Audley's Secret*, by M. E. Braddon. One of the best books of this ever-pleasing author, who always writes to meet the popular taste.

No. 845. *The Duke's Secret*, by Bertha M. Clay, a writer whose novels are always welcomed and who does not possess the ability to write anything uninteresting.

No. 843. *A Life's Romance*, by The Duchess. A tale of unusual and thrilling interest throughout. To many readers the name of this author is a guarantee of a good story, and this is one of the best.

No. 848. *Uarda*, by Georg Ebers. The works of this writer need no words of commendation to lovers of good fiction. Uarda is a book of the kind that chains the attention of the reader until it is finished, and during its reading is always laid aside with regret.

No. 844. *Hypatia, or New Foes with an Old Face*, by Charles Kingsley. To those who enjoy fiction of a more substantial and lasting character, but nevertheless of deep interest throughout, written with the purpose of giving the reader more than simply a few hours of rest and pleasure, this story will appear strongly.

No. 849. *Master of Ballantrae*, by R. L. Stevenson. This story was but lately finished in the *Century* magazine. It was one of the best and most successful stories that has appeared in recent publications. The author's fame is proof that it is worth a very careful reading.

No. 846. *The Scarlet Letter*, by Nathaniel Hawthorne, is a book of absorbing interest, and will always be held in high esteem. A story wonderfully written and vastly more than an idle tale. It is worthy any commendation that can be given it. Until very recently it has been sold only in expensive binding.

No. 847. *The Career of a Nihilist*, by Stepniak. The subject of this story is found in the exciting and surprising scenes in the Russian provinces, where plots and counterplots are continually arousing the people and unsettling the government. Startling incidents hold the reader closely throughout the whole story and are a revelation to residents in this free land.

No. 850. *Tour of the World in Eighty days*, by Jules Verne. No other author has ever told such fascinating stories in such a delightful way as Jules Verne. The books of this author will always retain an interest to the reader, and what years past seemed to be but his fanciful imaginations are becoming realities of to-day.

ADDITIONAL OFFERS.

To any one sending us only \$1 we will mail the complete list of 10 books.

Or, for \$1 we will mail any 6 of the books and this paper one year.

Or, for 75 cents we will mail any 3 of the books and this paper one year.

Or, for 65 cents we will mail any 2 of the books and this paper one year.

All postage paid by us in each case. This offer good during the next 30 days.

We will give the choice of any two of the books to any one sending us one new subscriber to this paper, at 50 cents, and the new subscriber may accept any of the above offers. For example, the new subscriber may pay \$1 and receive any 6 of the books and this paper one year and we will mail any 2 of the books to you for securing the new subscriber. See "Who is a new subscriber?" below.

DO NOT DELAY. WORK WHILE THIS OFFER LASTS.

It will be easy to secure the whole list in this way. Think of it! Send only 5 subscribers to this paper, at 50 cents each, and you will receive the full list of 10 books *Free*. We prepay postage in every case.

Who is a NEW Subscriber? The above offers are made to increase our subscription list, therefore a change from one member of a family to another is not securing a new subscriber. A new subscriber must be a person who is not now on our subscription list, and one whom you have sought out and solicited to take the paper. Sending your own subscription, or the name of your wife, husband or any other member of your own family, is not sending a new subscriber in the sense we intend it, and will not entitle you to an additional premium. You may count your own name, or the renewal of any former subscriber, towards a premium when three or four names besides your own are sent, as this shows you have actually done some work, and been out among the people telling them of the merits of our paper.

Order by the Premium Numbers and address letters to

FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

Smiles.

A SCHOOL IDYL.

Ram it in, cram it in,
Children's heads are hollow;
Slam it in, jam it in,
Still there's more to follow—
Hygiene and history,
Astronomic mystery,
Algebra, histology,
Latin, etymology,
Botany, geometry,
Greek and trigonometry—
Ram it in, cram it in,
Children's heads are hollow.

Rap it in, tap it in,
What are teachers paid for?
Bang it in, slam it in,
What are children made for?
Ancient archæology,
Aryan philology,
Prosody, zoology,
Physics, cluictology,
Calculus and mathematics,
Rhetoric and hydrostatics—
Hoax it in, coax it in,
Children's heads are hollow.

Scold it in, mold it in,
All that they can swallow;
Fold it in, hold it in,
Still there's more to follow.
Faces pinched, sad and pale,
Tell the same undying tale—
Toll of moments robbed from sleep,
Meals untasted, studies deep;
Those who've passed the furnace through,
With aching brow, will tell to you
How the teacher crammed it in,
Rammed it in, jammed it in,
Crunched it in, punched it in,
Rubbed it in, clnbbd it in,
Pressed it in, caressed it in,
Rapped it in, and slapped it in,
When their heads were hollow.

—Puck.

THE MATHEMATICAL TREATMENT.

There was a doctor of the advanced school. He laid his finger on my pulse, and with his watch in hand, gave it a fair start and observed it carefully all of the way around. "Strong 47," he said in a moment. Then he consulted a card that was covered with figures, and continued, "That equals 63," and he placed that number on a slate. "Put out your tongue. Good! That is 14," he said.

"Inches?" I asked.
"How is your appetite?" he inquired, ignoring my question.
"Equal to the supply."
"That makes 204," he replied.
"Can't you reduce it a little?" I asked, but failed to get his attention.
"Cold feet?"
"Yes," I answered.
"Three," he said.
"No, two," I replied to correct him.
He set the 3 under the other figures. He then placed a thermometer in my mouth, which he afterwards consulted in connection with the card. A good 198," he said.
"Impossible," I suggested mildly.
He wrote down the 198, and asked if I had headaches.
"Sometimes in the morning, after being kept late at the office," I answered.
"Four," he said.
"Isn't that rather low?" I asked.
"Do you smoke?" he inquired.
"Yes."
"Ten," he replied.
"No; two for ten," I said.
He put down the 10.
"Do you sleep well?" he asked.
"That depends upon the baby," I answered.
"We won't consider that," he said.
"You had better call it 980," I suggested.
He added together the figures that he had placed on the slate. "That makes 496," he said.
"Is that the amount of the bill?" I asked.
"Bill!" he replied. "That is the number of the prescription. I want you to know that medicine with me is no longer an experiment, for I have reduced it to a mathematical certainty. Every symptom has its number, and the numbers indicate the medicine that is needed. I have worked for fifteen years in formulating my prescriptions and perfecting the treatment, but I have it now. Your bill is \$10."

I understood that number, and left the office feeling relieved and deeply impressed by the doctor's learning.

TALE OF A CENT.

I'll tell you of a man who went to a general store to spend a cent. He bought the goods he was told to get, but they wouldn't let him have them yet. They sent them first to the entry clerk, a weary man with two men's work. He sent them up to be checked, and then they sent them back to be entered again. Then came a boy with a braided cap and took them down for a girl to wrap. She wrapped them tight and laid them aside till after lunch, when they were tied. The bundle then was lugged about from pillar to post and in and out, to be entered and checked and examined again, till at last they reached the starting place, and the

purchaser met them face to face. He spent the remaining part of the day reaching the cashier's desk to pay, and finally took his goods and went, right glad it was only a penny he spent. "Had I squandered a nickel," he said to his wife, "I would have taken the rest of my natural life."—*Detroit Free Press.*

DRY GOODS DIPLOMACY.

A salesman should know his goods and his customers, and if, beyond that, he has some general knowledge of human nature, he will often find it useful.

"I am very sorry, sir," said a clerk in a dry goods store, "but I have nothing exactly like the sample. The very last remnant was sold yesterday."

"But I must have it," said the customer. "Otherwise, how shall I face my wife?"

"Well, now," answered the salesman, "if I might venture to suggest, why don't you invite a friend home to dinner with you?"—*Philadelphia Record.*

WHAT WAS IN THE MIND OF DREAMY-EYED EDITH.

Our little Edith is five years old. She has golden curls and those far-gazing hazel eyes that seem sometimes to see visions.

The other day at dinner her face was lighted with unusual beauty, and her dark eyes had a dreamy look which called to her fond mother's mind the line, "Heaven lies about us in our infancy." She longed to know what thoughts were in the childish brain to soften and deepen the dark eyes, when Edith turned her sweet face and asked, "Mamma, do you chew your pudding?"—*Wide Awake.*

SOMETHING TO LOOK FORWARD TO.

Willie—"That was an awfully funny story you told pa the other night in the library. I stood outside the door an' almost split myself laughing."

The colonel—"You young rascal! you had no right to listen. You didn't repeat that story, did you?"

Willie—"You'll just find out when you see mother."

HIS ANXIOUS FEARS.

Mother—"Willie, when you went to the cupboard to steal the jam, weren't you afraid of something?"

Willie (who has been at the jam again)—"Ycs, mother."

Mother—"Now, what was it you were afraid of, eh?"

Willie—"I was afraid I couldn't find the jam."

SO HE WAS.

"I thought you advertised that you were selling out at cost?" growled the customer, throwing down the required twenty-five cents for a small package of note-paper.

"Yes, sir," replied the stationer briskly.

"That's right. We referred to our postage stamps. Want any?"

THE REASON WHY.

Fussy—"I can't see why you women wear such long, trailing skirts."

Mrs. Fussy—"To have something to occupy our hands with, of course. Why do you men carry a walking-stick when you are not lame?"—*New York Judge.*

THE BEST WAY.

"Do you never fight duels in America?" he asked.

"Oh, yes, frequently," returned the American.

"With what weapons generally?"

"Lawyers."

THE DEFICIENCY.

He—"Sorry to have kept you waiting, but my watch was wrong. I shall never have faith in it again."

She—"It's not faith you need, but works."

—*Life.*

A DECIDED COOLNESS.

"I noticed a coolness between Miss Roseleaf and Mr. Treatley last night."

"Is that so? And they're engaged, too."

"Yes; they were eating ice-cream when I saw them."

COULDN'T BE A CRAZE.

Winks—"Your friend Jones is one of the finest pianists I ever heard. Why don't he go on the stage?"

Minks—"Wouldn't pay. His name is too easy to pronounce."—*New York Weekly.*

NO DANGER.

Visitor—"Isn't your mother afraid, Willie, of catching cold in those slippers?"

Willie—"Hub! I guess you don't know them slippers. Ma uses them to warm the whole family with."—*American Grocer.*

A GILDED YOUTH.

"Don't you think that Mr. Gilder's voice has a very metallic ring in it?"

"Very naturally so, my dear, all his teeth are crowned with gold."—*Harvard Lampoon.*

HOME STUDY. Thorough and practical instruction given by Mail, at Student's Home, in Book-keeping, Business Forms, Penmanship, Arithmetic, Letter Writing, Grammar, Spelling, etc. 7 Years' Success. Students and references from every State. All ages taught. A Trial Lesson and Catalogue free. Bryant & Stratton, 449 Main St., Buffalo, N. Y.

LADIES WHO WILL DO WRITING

The tremendous sale of my preparation, Gloria Water, has so increased my correspondence that I will guarantee good wages to ladies who will do writing for me at home. Address in own handwriting MISS EDNA L. SMYTHE, Box 1101, South Bend, Ind. Mention paper.

WILL MAKE GOOD WAGES.

CAMPAIGN BADGE, gold plated, Card Agt's Outfit & Present 4c, Tuttle P. Co., No. 11aven, Ct

500 SCRAP PICTURES, AUTO. VERSES & RIDDLES FREE

YOUR NAME ON 25 ENAMELED ELITE CARDS (new) 20 Imported Ornaments, 12 PENS, 1 Chain, 1 Lace Pin, 1 Ring, with our popular STORY PAPER 3 months 10c. Samples 2c. LAUREL CARD CO., Clintonville, Conn.

YOUR NAME ON LATEST STYLE CARDS Verres, 1 Ring, 1 Pocket Pencil, 1 Fountain Pen, 1 Initial Handkerchief, STORY PAPER 3 MONTHS, and Agent's New Samples, all 10c. CLINTON & CO., North Haven, Conn.

50 SILK FRINGED FAN, ENVELOPE, PANCY Shape and Acquaintance Cards, (Name on all) 10 cents, 500 Samples of Silk Ribbon, Silk France, Rosette Cards, Tricks, Games, Songs and Agents Complete Outfit for 1892, 4 cts. CROWN CARD CO., CADIZ, OHIO.

Ohio Electric Co., Cleveland, want agents. Cat. free.

RUBBER STAMPS. Best made. Immense Catalogue Free to agents. The G. A. HARPER MFG. CO., Cleveland, O.

WATCH FREE—If you want one send a stamp to the National Illus. Magazine, Washington, D. C.

6th and 7th Books of Moses, Aliburtus Magnus, Long Lost Friend, Mineral Rods and Dip Needles, B. G. Stauffer, Bachmanville, Pa.

\$5 A DAY SURE. \$2.15 Samples Free. Horse owners buy 1 to 5. 20 other specialties. E. E. BREWSTER, HOLLY, MICH.

CUT IN TWO Prices of Sewing Machines, Safes, Scales, Blacksmith's Tools, Road Carts, Buggies, Harness and 1000 other things. List Free. CHICAGO SCALE CO., CHICAGO, ILL.

BICYCLE TO BOYS AND GIRLS UNDER 18 YEARS OF AGE ON EAST CONDITIONS WITHOUT COST OF MONEY. Western Pearl Co., 334 Dearborn St., Chicago, Ill.

ALL GOODS ON TRIAL ON EASY CONDITIONS. CATALOGUES FREE. Write at once to HOLLY WATCH CO., Jersey City, N. J.

AGENTS WANTED ON SALARY or COMMISSION, to handle the New Patent Chemical Ink Erasing Pencil. Agents making \$50 per week. Monroe Eraser Mfg. Co., x98, LaCrosse, Wis.

BEST PAYING THING for Agents is our PHOTOGRAPH FAMILY RECORD PICTURE. We give you liberal terms. Address Dept. W. C. P. CORY & CO., 41 to 45 Jefferson St., Chicago. Be sure to mention this paper when you write.

CUT THIS OUT and send with your name and express office address and we will send you free to examine and wear, a SOLID GOLD linked watch that you can sell for Ten Dollars. If it suits, you send us Four Dollars and express charges; if not, return it to me. Mention whether Ladies' or Gents' size is desired. W. S. SIMPSON, 37 College Place, N. Y.

NOVELTIES FOR AGENTS Convertible Wire Baskets, Handy Button, Self-threading Needle & many others. Catalog sent free V. Cassgreen Mfg. Co., 134 Van Buren St., Chicago, Illinois

AGENTS Coin Money selling Beveridge's Automatic Cooker. Every woman buys. Best and cheapest cooker sold. Big Profits to good workers, male or female. Sample's weight 12 oz. Adv'g matter furnished. For circulars address W. E. BEVERIDGE, Baltimore, Md.

A PRESENT.

SEND us your address and we will make you a present of the best Automatic WASHING MACHINE in the World. No wash-board or rubbing needed. We want you to show it to your friends, or act as agent if you can. You can COIN MONEY, or give a HANDSOME WASHING MACHINE to the first from each country. Write quick. Address N. Y. LAUNDRY WORKS, 80 Murray Street, N. Y. *****
Mention this paper when you write.

Campaign Badges. Gold plate and finely finished with correct pictures of the candidates for President and Vice President of all parties. Over 6,000,000 badges sold in 1888. There can be 15,000,000 sold in 1892. You can sell your share of them, by being the first in your place to have them for sale. Sample 10 cents, 3 for 25 cents. 1 dozen 50 cents. Post paid. 1 Gross by Express \$3.25. Address HOWARD MFG. CO., Providence, R. I.

Mention this paper when you write.

YOU CAN MAKE \$4 PER DAY handling the fastest selling household article on record. OVER A MILLION SOLD IN PHILADELPHIA. No matter where you reside, everybody needs it. Write to-day, enclosing stamp, and we will mail you FREE SAMPLE and full particulars, which will enable you to commence work at once. Address, W. H. WILLIAMSON, 44 N. 4th St., Philada., Pa.

WE WANT YOU To act as our agent. We will treat you well and pay liberally for your services. The work is easy, pleasant and adapted to both young and old of either sex. GEO. STINSON & CO., Box 154, Portland, Me.

HILL HE PAYS THE EXPRESS ON THIS WATCH \$3.97 BEAUTIFUL ENGRAVED CASE

W. Hill & Co., Gents-Received watch C.O. D. \$3.97 charges all paid. Examined and found just as represented. And more than pleased. Would not take \$10 for it. Thanks for promptness. Resp. TOURS, HOWARD STARR, Englewood, Ill. Above is one of many testimonials.

One Year Trial FREE. Genuine Duober, solid silverine, engraved gents size watch, guaranteed to wear and keep its color equal to coin silver for 20 years. Cut shows back of case. The movement is full plate of ruby jeweled works, celebrated for perfect time-keeping qualities. Many watches are sold at \$10 that will give no better results. We send with each watch an agreement giving you the privilege of returning it within one year if not satisfactory. Cut This Out and send it with your order and we will ship watch to you by express C. O. D. If on examination at the express office you find it as represented, the agent \$3.97, we paying charges and it is yours, otherwise you pay nothing and it will be returned at our expense.

W. HILL & CO., Wholesale Jewelers, 207 State St., Chicago.

How TO MAKE A Fortune

WANTED—Salesmen; who can easily make \$25 to \$75 per week, selling the Celebrated Pinless Clothes Line or the Famous Fountain Ink Eraser; patents recently issued. Sold ONLY by salesmen to whom we give EXCLUSIVE TERRITORY. The Pinless Clothes Line is the only line ever invented that holds clothes without pins—a perfect success. The Fountain Ink Eraser is entirely new, will erase ink instantly, and is king of all. On receipt of 50c. will mail sample of either or sample of both for 1, with circulars, price-lists and terms. Secure your territory at once THE PINLESS CLOTHES LINE CO., 168 Hermon Street, Worcester, Mass. Mention this paper when you write.

\$30 to \$50 A WEEK I WANT an honest, earnest man or woman in every county to take the sole agency for an article that is needed in every home and indispensable in every office. SELLS AT SIGHT, in town or country. You can make \$700 in three months, introducing it, after which it will bring you a steady income. Splendid opening for the right person. Don't lose a moment. Good jobs are scarce and soon taken. Write at once to J. W. JONES, Manager, Springfield, Ohio.

A BIG OFFER 50c. MADE IN A MINUTE! If you will hang up in the P. O., or some public place, the two show bills that we send, we will give you a 50c. cert., and send it in advance with samples and bills. This will trouble you one minute, and then if you want to work on salary at \$50 or \$100 per month, let us know. We pay in advance. GIANT OXIE CO., 21 Willow St., Augusta, Me.

CUT THIS OUT and return it to us with 10c silver or stamps, and we will insert your name in our Agents' Directory. You will get thousands of Papers, Cards, Magazines, Novelties, etc., from publishers and manufacturers who want agents. DON'T MISS THIS. Address WESTERN MAIL CO. St. Louis, Mo.

FREE. SUPERB FORM, LOVELY COMPLEXION, PERFECT HEALTH. These are my portraits, and on account of the fraudulent air-pumps, "wafers," etc., offered for development, I will tell any lady FREE what I used to secure these changes. HEALTH (cure of that "tired" feeling and all female diseases) Superb FORM, Brilliant EYES and perfectly Pure COMPLEXION assured. Will send sealed letter. Avoid advertising fraud. Name this paper, and address MRS. ELLA M. DENT, STATION B, San Francisco, Cal.

PARKER'S HAIR BALSAM Cleanses and beautifies the hair. Promotes a luxuriant growth. Never Fails to Restore Gray Hair to its Youthful Color. Cures scalp diseases & hair falling. 50c. and \$1.00 at Druggists

FREE CONSUMPTIVE Use Parker's Ginger Tonic. It cures the worst Cough, Weak Lungs, Debility, Indigestion, Pain, Take in time, 50 cts.

MISS BEACH'S Curling Fluid. Keeps the hair in curl for days. Innocent as cologne. A toilet necessity. Not sent on trial. 30,000 Ladies Have Endorsed It. At druggists, or prepaid, 50c. LADY AGENTS wanted. DENISON CHEMICAL CO., 56 (G) LaSalle St., Chicago, Ill.

FREE Dr. Judd's Electric Belt and Battery Combined, sent to anyone on trial, free. Price \$3, \$6, \$10, \$15 if satisfied. Cures Rheumatism, Lame Back, Effects of La Grippe, Weakness of either Sex, other diseases. Headache Relieved in One Minute. Free Medical Advice. Electric Trusses. Give Size. Agents Wanted. DR. JUDD, DETROIT, MICH.

Mention this paper when you write.

CONSUMPTION. I have a positive remedy for the above disease; by its use thousands of cases of the worst kind and of long standing have been cured. Indeed so strong is my faith in its efficacy, that I will send TWO BOTTLES FREE, with a VALUABLE TREATISE on this disease to any sufferer who will send me their Express and P.O. address. T. A. Slocum, M. C., 181 Pearl St., N. Y.

CANCER AND TUMORS scientifically treated and cured. No knife. Book Free. Drs. GRANTON & NORRIS 163 Elm Street, Cincinnati, Ohio.

VARICOCELE We will send you the MARY ELOUS French remedy CATHOS free. It is an absolute and permanent cure. Use it and pay if satisfied. Address Von Mohl Co., Sole Agents, Cincinnati, O.

PILES Remedy Free. INSTANT RELIEF. Final cure in 10 days. Never returns; no purge, no salve, no suppository. A victim tried in vain every remedy has discovered a simple cure, which he will mail free to his fellow sufferers. Address J. H. REEVES, Box 3290, New York City, N. Y.

DEAFNESS & HEAD NOISES CURED by Back's Visible Tubular Ear Catalysts. Whispers heard. Successful when all remedies fail. Sold only by F. H. HIXCOX, 553 B'way, N. Y. Write for book of proofs FREE

If afflicted with sore eyes use **Dr. Thompson's Eye-Water**

RUPTURE Positive Cure. By mail. Sealed Book Free. Address Dr. W. S. Rice, Box F, Smithville, N. Y.

A SURE and permanent cure for Epilepsy, Fits, in 24 A hours. Free to poor. A. A. Ferdinand, St. Louis, Mo.

Selections.

NOTHING TO DO.

Nothing to do—condensation of bliss!
To feel lazy luxury's lingering kiss;
To drift with the hours nor attempt to with-
stand
The sweep of old Time's irresistible hand.
When existence is ended, I ask not to go,
Where some long, golden stretch tires the eye
with its glow,
Nor puzzle my mind with the flats or the
sharps
Of anthems celestial on aureate harps.
'Twere better by far to recline near some grove
Where even the winds stop to rest ere they
rove;
Or where tall grasses nod as the breeze loiters
through,
And laugh while they whisper of nothing to
do.
—Philander Johnson.

GOURD BRIC-A-BRAC.

Gourd decoration is one of the fashion-
able fads of the season. The designs are
traced with pen and ink, done in the
poker-work or washed in with water-
colors. A fanciful design, indicating the
use for which the gourd is intended, is
appropriate; for instance, a receptacle for
sweetmeats is ornamented with a huge
gadfly, holding a large spoon, with which
he is supposed to be stirring boiling sugar
in a saucepan. A swarm of flies, scenting
the sweet odor, are hovering about. A
water-bottle has an appropriate idea of
sea-weeds and feathery ferns. Japanese
designs are also used.

A sketchy design of "Rebecca at the
Well" is pretty for a water-bottle or
drinking-cup. This should first be traced
on the surface with a pen and India ink,
filled in with oil-colors and covered with
a coat of French varnish.

Another way of preparing them is to
oil the surface well, then scratch the de-
sign, after which rub the whole over with
lamp-black and oil, which sinks into the
engraved lines and shows them off.

SNAPPISHNESS.

Married couples that coo harmoniously
as ring-doves in public are sometimes
mere snapping-turtles behind the scenes.
Mrs. Caudle, according to her own ac-
count, was as mild as a zephyr in society,
but she was a white squall in a night-
gown when she had "turned in." Her
lectures were all "snap," and it is sur-
mised that the wide celebrity they ac-
quired when printed was mainly attribut-
able to the force and accuracy with which
they illustrated the experience of thou-
sands of married men. Unfortunately for
the peace of families, all husbands are not
Caudles. Some of the persecuted—per-
haps the majority of them—instead of
taking refuge in assumed deafness, retort
violently, and hence, domestic tempests,
fierce and frequent. This is bad. A mild
answer turneth away wrath, and absolute
silence generally cools, if it does not ex-
tinguish it. We suggest the former as the
best remedy. Husbands should be con-
siderate. Their helpmeets have much to
try their tempers. The home department
is not an elysium, as the "man of the
house" would find to his sorrow if he were
to try it for a single day.

THE USES FOR EGGS.

There are very few farmers who ever
give a thought to the various uses to which
eggs are adapted. The general suppo-
sition is that all eggs are shipped to market
and there sold for human consumption.
Such, however, is far from being the case.
Eggs are used in putting the finishing
glaze on calico, in gilding, in clarifying
liquors, in book-binding and in photog-
raphy. In the preparation of photo-
graphic paper alone, millions of eggs are
annually used, one European establish-
ment being credited with the consumption
of over 4,000,000 eggs annually for this
purpose. No vegetable or animal substi-
tute for albumen has yet been found, and
a prize of \$2,500, offered thirty years ago
in England for such a discovery, is still
unclaimed.

The yolks of eggs are solidified and
used in Europe in the arts. It seems
strange that with our large canning in-
dustries we have not yet seen canned or
condensed eggs that should surely be
available for cooking purposes. With
such an industry for our surplus sup-
ply when eggs are plentiful, we should
be able to avoid the low prices that have
lately been ruling for eggs, and also be in
a position to partly supply the consump-
tive demand of other countries.

Measure off a space 40 inches long and 32 inches
wide, and you will then realize the size of the
elegant Gilt Frame on the beautiful Picture
described on pages 9, 10 and 11, which you can
secure free, by only a little work.

Recent Publications.

CATALOGUES RECEIVED.

Lippelmann Carriage Co., Cincinnati, Ohio,
makers of a fine line of vehicles.
Spangler Mfg. Co., York, Pa., makers of corn-
planters, grain-drills and a general line of
agricultural implements.
Boomer & Boschert Press Co., Syracuse, N.Y.,
makers of cider and wine machinery.
Catalogue of Keystone corn-huskers and
fodder-cutters. Keystone Mfg. Co., Ster-
ling, Ill.

EXPERIMENT STATION BULLETINS AND
GOVERNMENT PUBLICATIONS.

Sent free, on application, to residents of the
state in which the station is located. Address
Agricultural Experiment Station.

UNITED STATES DEPARTMENT OF AGRICUL-
TURE.—(Washington, D. C.) Office of Exper-
iment Stations. Proceedings of the fifth an-
nual convention of the Association of Agri-
cultural Colleges and Experiment Stations.
Experiment Station Record, Vol. III, No. 9.

Division of Chemistry.—(1) Foods and food
adulterants, part sixth. (2) Special report
on extent and character of food adulterations,
including state and other laws relating to foods
and beverages.

Division of Statistics.—Miscellaneous Series,
Report No. 2. Report on the agriculture of
South America, with maps and latest statis-
tics of trade. Report No. 3. Co-operative
credit associations in certain foreign coun-
tries and their relation to agricultural inter-
ests.

Division of Botany.—Grass and forage exper-
iment station at Garden City, Kansas, and co-
operative branch stations in the South.

Division of Vegetable Pathology.—The Journal
of Mycology, Vol. VII, No. 2.

UNITED STATES DEPARTMENT OF STATE.—
(Washington, D.C.) Special Consular Reports.
Streets and highways in foreign countries.
Beet sugar industry and flax cultivation in
foreign countries. India-rubber—production,
manufacture and trade.

ALABAMA.—(Canebrake Station, Uniontown)
Bulletin No. 14, March, 1892. Cotton. (State
Station, Auburn) Bulletin No. 36, March, 1892.
Some leaf-blight of cotton. Bulletin No. 37,
March, 1892. Tobacco.

CONNECTICUT.—(Storrs School Station, Storrs)
Bulletin No. 8, April, 1892. Summary of an-
nual report for 1891.

KANSAS.—(Manhattan) Bulletin No. 29, De-
cember, 1891. Experiments with oats. Bulle-
tin No. 30, December, 1891. Experiments with
corn.

MASSACHUSETTS.—(Hatch Station, Amherst)
Meteorological summary for April, 1892.

NEW HAMPSHIRE.—(Hanover) Bulletin No.
15, December, 1891. Patent cattle foods.

NEW JERSEY.—(New Brunswick) Bulletin
No. 87, April 13, 1892. Analysis of commercial
feeds.

OHIO.—(Columbus) Bulletin No. 4, Vol. V,
April, 1892. Insects which burrow in the stem
of wheat.

PENNSYLVANIA.—(State College, Center
county) Bulletin No. 19, April, 1892. Informa-
tion on spraying fruits.

RHODE ISLAND.—(Kingston) Bulletin No.
15, April, 1892. Treatment of loose smut of
oats. Fungicides and insecticides, and appa-
ratus for applying them. Black rot of the
grape and apple scab. Codling-moth canker-
worm and plum-cureulio.

SOUTH DAKOTA.—(Brookings) Bulletin No.
28, December, 1891. Irrigation.

VERMONT.—(Burlington) Bulletin No. 27,
January, 1892. Tests of dairy apparatus. Bul-
letin No. 28, April, 1892. Plant diseases—potato
blight and rot, a new potato disease, potato
scab, apple and pear scab, oat smut.

Let no housekeeper pass over the offer on
page 13 of this issue. Accept the generous offer
made and you will never regret it.

THIS PAPER

One Year Free

To any one sending us only one NEW
yearly subscriber at the regular price,
50 cents, for the paper alone.

This offer is good now under the following
conditions:

The NEW subscriber must be a per-
son whose name is not now on our
list, and must be a person whom you have
sought out and solicited to take the paper and
who has consented to receive it. A change
from one member of a family to another is not
securing a NEW subscriber.

The new subscriber will receive the paper a
full year for the regular subscription price, 50
cents, but will not be entitled to any
present or premium with it except upon
payment of the full "Price, including one
year's subscription." For example: the
beautiful picture, "Columbus at the Royal
Court of Spain" and this paper one year for
\$1; or, "Uncle Tom's Cabin" and this paper
one year for 60 cents.

Send us a new subscriber under these terms
and we will send you the paper free for one
year as your reward.

This offer must not be combined with
any other, and applies to this paper
only.

Accept it now, while it is good. It may be
withdrawn.

We have an office at 927 Chestnut Street,
Philadelphia, Pa., also at Springfield, Ohio.
Send your letters to the office nearest to you
and address

FARM AND FIRESIDE,
Philadelphia, Pa., or Springfield, Ohio.

BINDER TWINE

shipped anywhere
to anyone, in any
quantity at whole-
sale prices. Send stamp for samples or write for prices.
CASH BUYERS' UNION, 162 W. Van Buren St. B 11 Chicago.

SHORT HOME-FREE. Only one student in each
town given this privilege.
WRITE NEW RAPID College of SHORTHAND
BURLINGAME, N.Y. Send stamp for full particulars.

PATENTS

LEHMANN, PATTON & NESBIT,
Washington, D. C. Examina-
tions Free. Send for circular.

SYLPH CYCLES RUN EASY

Perfection of cycle manufacture; no
need now to ride springless cycles or de-
pend on tires alone for comfort. Sylph
Spring Frame destroys
vibrations. Light, sim-
ple, strong. Catafree
Rouse-Duryea Cy. Co.
32 E. St., Peoria, Ill. AGTS. WANTED

PRINTING OUTFIT 15¢

COMPLETE. 4 alphabetic rubber type, typeholder, bottle
Ink, Ink Pad and Toner. Put up in neat box with
directions for use. Satisfaction guaranteed. Worth 50c. Best
Linen Marker, Card Printer, etc. Sets names in 1 minute,
prints 500 cards an hour. Sent postpaid 15¢; 2 for 25c. Cat. free.
R. H. INGERSOLL & BRO., 65 Cortlandt St., N.Y. City.

ARE YOU MUSICAL?

We will send you FREE, five complete pieces of
music—full size—upon receipt of five names and ad-
dresses of families using pianos. Address,
WOODWARD'S MUSICAL MONTHLY,
842 Broadway, New York.

PRICE We sell DIRECT to FAMILIES
PIANOS ORGANS
\$150 to \$1500 \$35 to \$500.
Absolutely Perfect!
Sent for trial in your
own home before you
buy. Local Agents
must sell inferior instruments or
charge double what we ask. Catalogue free
MARCHAL & SMITH PIANO CO.,
255 East 21st St., N.Y.

LAST CHANCE

To Secure a \$30.00 Watch for
\$5.50

DUEBER solid silverine, war-
ranted to wear and keep its color
better than coin silver, better in
appearance, more durable, and in
every respect far more serviceable
than coin silver. Hunting case or
open face, your choice, guaranteed
to wear and retain its color equal
to coin silver for 20 years. Fitted
complete with our very highest
grade imported movement, rich-
ly jeweled and damasked, lever
escapement, double jeweled
balance, all the modern
improvements and guaranteed
to run and keep correct time for
ten years. Please state, when
ordering, whether you want
hunting case or open face. This
is a watch that will last you a
lifetime and you can easily sell
it for twice our price after you
have worn it ten years. GIGAN-
TIC OFFER to everybody for
30 days only. Cut this out
and send it with your order,
(no money required until after
you examine it) and we will ship
the watch to you by express
C. O. D. You examine it at the
express office and see for yourself
that it is not only equal to but better
than we have represented it, pay the
agent \$5.50 and the express charges and
it is yours, otherwise you pay nothing
and it will be returned at our expense. Order to-day, don't
wait, this will be your LAST CHANCE. Address
THE NATIONAL MFG. & IMPORTING CO.
334 Dearborn St., Chicago, Ill.

WARRANTED FOR 20 YEARS.

Law Mowers at Greatly Reduced Prices.

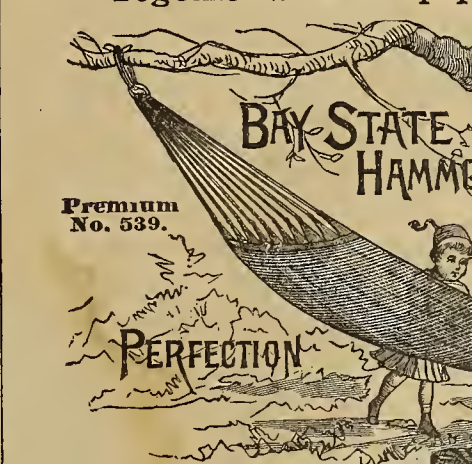
We present the following superior qualities of these machines, and
guarantee them to be exactly as represented and equal to any in the
market: Adjustable handle and wood roller, the only positive
force clutch in use, large wheels, cold drawn steel reel shaft,
tool steel knives, tool steel cutter-bar knife, long bear-
ings, gearing direct from ground wheel to reel.
The material used is of the very best, and the
workmanship so fine and true that parts
from different machines are inter-
changeable.

They
are a stan-
dard make,
and many thou-
sands now in use are
giving perfect satisfac-
tion. Arrangements direct
with the manufacturers admit of
a special price to our readers.
Premium No. 136, a 12-inch mower,
given for 15 subscribers to either the Farm and
Fireside or Ladies Home Companion, at 50
cents each.
Price, including one year's subscription
to either paper, \$4.75.
We offer it for sale for only \$4.50.
Premium No. 144, a 14-inch mower,
given for 16 subscribers to either the Farm
and Fireside or Ladies Home Companion, at
50 cents each.
Price, including one year's subscription, \$5.
We offer it for sale for only \$4.75.
Each mower will be carefully boxed and shipped by freight,
unless otherwise ordered, charges, which will be small, to be paid by receiver.

Address FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

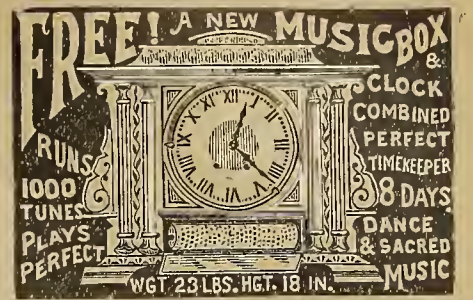
A PERFECTION, CLOSE-WOVE HAMMOCK

Together with this paper one year, for only \$1.50



Cool and comfortable, strong; closely woven instead of knit, it cannot catch and pull off the buttons. It is
11 feet long, 3 feet wide, and will easily sustain the weight of the heaviest person, and withstand the strain
of 400 or 500 pounds. Has patent iron ends.
Given as a premium for 6 subscribers to either the Farm and Fireside or the Ladies Home Companion,
at 50 cents each.
Price, including one year's subscription to either paper \$1.50.
We offer it for sale for only \$1.35. Postage or express paid by us in each case. Give your express
station if different from post-office address.

Address FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.



To introduce it, one in every county or town furnished
reliable persons, (either sex) who will promise to show it.
Send at once to inventor, 25 West 31st Street, N. Y. City.
Mention this paper.

\$5 to \$15 per day, at home, selling
LIGHTNING PLATER
and plating jewelry, watches
tableware, &c. Plates the
finest of jewelry good as
new, on all kinds of metal
with gold, silver or nickel.
No experience. No capital.
Every house has goods need-
ing plating. Wholesale to
agents \$5. Write for circulars.
H. E. DELNO &
Co., Columbus, O.
Mention this paper when you write.

OPIUM

Morphine Habit Cured in 10
to 20 days. No pay till cured.
Dr. J. Stephens, Lebanon, O.

FOR A 2¢ STAMP

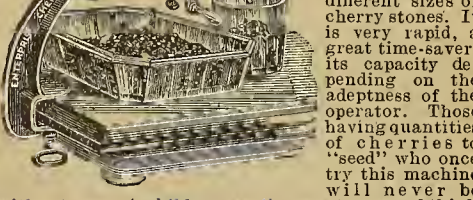
WE WILL SEND
FREE TO ANY ADDRESS A TRIAL BOX OF
NO PAIN! A-CORN SALVE POISON!
REMOVES THE CORN EVERY TIME
GIANT CHEMICAL CO. PHILA. PA.

RUPTURE

Positive Cure. By mail. Send
for circular. Address Capt. W. A.
Collings, Smithville, Jefferson Co. NY

ENTERPRISE CHERRY STONER.

Prem. No. 688.
Handy! Saves Labor!
The Best Made!



It can be adjusted by
thumb-screws for
different sizes of
cherry stones. It
is very rapid, a
great time-saver,
its capacity de-
pending on the
adeptness of the
operator. Those
having quantities
of cherries to
"seed" who once
try this machine
will never be
without one. A child can easily operate one and think
it only "play." Attached instantly to any table as
shown in cut. All orders will be shipped promptly.
Given as a premium for 3 yearly subscribers at
50 cents.
Price, including one year's subscription, only \$1.
We offer it for sale for 75 cents. It must al-
ways be sent by express, the receiver to pay charges,
which will be light. Be sure to give your express
office. Send all orders to
FARM AND FIRESIDE,
Philadelphia, Pa., or Springfield, Ohio.

Always mention this paper when answer-
ing advertisements, as advertisers often
have different articles advertised in several
papers.

FARM AND FIRESIDE.

ISSUED 1st AND 15th OF EACH MONTH BY
MAST, CROWELL & KIRKPATRICK.

THIS PAPER HAS BEEN ENTERED AT THE POST-OFFICE
AS SECOND-CLASS MAIL MATTER.

TERMS OF SUBSCRIPTION:

One Year, - (24 Numbers), - 50 Cents.
Six Months, - (12 Numbers), - 30 Cents.

The above rates include the payment of postage by
us. Subscriptions can commence any time during the
year. Send for Premium List and see premi-
ums offered for obtaining new subscribers.

Payment, when sent by mail, should be made in
Express or Postal Money Orders, Bank-checks or
Drafts. WHEN NEITHER OF THESE CAN BE PROCURED,
send the money in a registered letter. All post-
masters are required to register letters whenever re-
quested to do so. Do not send checks on banks in
small towns.

Silver, when sent through the mail, should be care-
fully wrapped in cloth or strong paper, so as not to
wear a hole through the envelope and get lost.
Postage stamps will be received in payment for sub-
scriptions in sums less than one dollar.

The date on the "yellow label" shows the time to
which each subscriber has paid.
When money is received the date will be changed,
which will answer for a receipt.

Discontinuances. Remember that the publishers
must be notified by letter when a subscriber wishes
the paper stopped, and all arrears must be paid.
When renewing your subscription, do not fail to
say it is a renewal. If all of our subscribers
will do this, a great deal of trouble will be avoided.
Also, give your name and initials just as now on the
yellow address label; don't change it to some other mem-
ber of the family; if the paper is now coming in your
wife's name, sign her name, just as it is on label, to your
letter of renewal.

We have an office at 927 Chestnut Street, Phil-
adelphia, Pa., also at Springfield, Ohio. Send your
letters to the office nearest to you and address

FARM AND FIRESIDE,

Philadelphia, Pa., or Springfield, Ohio.

The Advertisers in this Paper.

We believe that all the advertisements in this paper
are from reliable firms or business men, and do not in-
tentionally or knowingly insert advertisements from
any but reliable parties; if subscribers find any of
them to be otherwise we should be glad to know it.
Always mention this paper when answering advertise-
ments, as advertisers often have different things ad-
vertised in several papers.

STUMP BLASTING CARTRIDGES, Caps, Fuse,
Mfrs. prices to introduce. Catalogue free.
AJAX DYNAMITE WORKS, Bay City, Mich

ZINC COLLAR PADS
WILL CURE YOUR SORE NECK HORSE
ASK YOUR HARNESS MAKER FOR THEM.

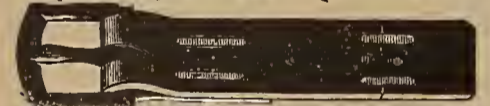
FARMER'S
LEONARD D. HARRISON, Box A., New Haven, Conn

FRUIT EVAPORATOR
THE ZIMMERMAN
Different sizes and prices. Illustrated Catalogue free.
THE BLYMYER IRON WORKS CO., Cincinnati, O.

3,000 JOB LOT BICYCLES
20 to 50¢ off.
And lowest prices on all '92 makes & 2d
hd. Easy payments. We sell everywhere.
'91 Cushman \$85 Juno, balls \$65 40 in. \$37 Victor Jr., balls \$17
'90 Crescent ('91 make) \$50 '91 \$135 Rambler \$90
'91 \$145 Cushman High Grade \$90 And 20 other styles as cheap.
Largest stock and oldest dealers in U. S. Agts. wanted.
Catalogue free. Rouse, Hazard & Co., 32 E St., Peoria, Ill.

**MY WIFE SAYS SHE CANNOT SEE HOW
YOU DO IT FOR THE MONEY.**
\$12 Buys a \$65.00 Improved Oxford Singer
Singer Sewing Machine; perfect working, reliable,
finely finished, adapted to light and heavy work,
with a complete set of the latest improved attachment.
FREE. Each machine is guaranteed for 5 years. Buy
direct from our factory, and save dealers and agents
profit. Send for FREE CATALOGUE. Mention paper.
OXFORD MFG. CO., Dept. 24, CHICAGO, ILL.

Rapid HARNESS MENDERS.



Just Drive 'Em In and CLINCH 'Em.
The quickest, strongest, cheapest and best way to mend your
harness. COST ONLY 25¢ FOR ONE GROSS IN TIN BOX.
NO TOOLS REQUIRED. BUFFALO SPECIALTY MFG. CO.,
For Sale by Grocers and Hardware Dealers. BUFFALO, N. Y.

ERTEL'S VICTOR
SHIPPED ANYWHERE TO OXIDE
ON TRIAL AGAINST ALL OTHER
HAY PRESS
PURCHASE 100 LBS. OF ONE
DOING MOST AND BEST WORK
GEO. ETEL & CO. QUINCY, ILL.

ARE YOU LOOKING FOR A VEHICLE?

WE HAVE IT We Make the Best
on Earth.

OUR B-O-E AND "VELVET" CARTS.
SEND FOR ILLUSTRATED CATALOGUE
FREE OF VELVET AND STANDARD
VEHICLES.
THE LIPPELMANN CARRIAGE CO., Cincinnati, O.

SAY! BEE-KEEPER!

Send for a free sample copy of ROOT'S handsomely
illustrated Semi-Monthly (36-page) **CLEANINGS**
IN BEE-CULTURE (\$1.00 a year) and his 52-page
illustrated **BEE-KEEPERS' SUPPLIES**
FREE for your name and address on a postal. His
A B C OF BEE-CULTURE, 400 double-column
pages, price \$1.25, is just the book for YOU. Address
ROOT, THE BEE-MAN, Medina, O.

Before you buy a **CIDER**
Press, write the HY-
DRAULIC PRESS
MFG. CO. of Mt. Gilead, O.,
for catalogue, which will be
mailed free on application.

HYDRAULIC
Presses for all pur-
poses; also general ci-
der makers' supplies.



BEST LINE
CHICAGO
TO
DENVER.

\$50 Down Buys
a Farm-In Crop!

If you want an 80-acre farm in a good neighborhood;
near railroads; good buildings and fences and now in
crop, send to-day for my lists. 80, 160, 320-acres at
prices from \$2.50 to \$20.00 per acre!

As my terms are ten years time and only

One-Tenth in Cash

any live farmer can make his crops "pay him out."
This is better than raw land at any price. Pays an
income from the beginning.

OTIS A. TURNER,
Room 5, New England Bldg, Kansas City, Mo.

THE POPULAR NEW MAIL.



DIAMOND FRAME, \$100.

All Drop Forgings.
A Wheel Cannot be Made Better!
Handsome Safety Made!

CUSHION TIRES. TANGENT SPOKES
nickeled to intersections; **DIAMOND FRAME**,
braided at all points. **EASY GARFORD SADDLE**,
New Mail pattern low handle bars.

Also, New Mail, Ladies' Pattern.....\$100
Pneumatic.....\$120 and \$150
" " Boys' Diamond.....\$60
" other makes Boys' Saffies.....\$35

See them and get Catalogue and List
of Second-hands. Manufacturers,

WM. READ & SONS,
107 Washington Street, Boston, Mass.
Mention this paper when you write.



For Harness, Buggy Tops, Saddles, Fly Nets
Traveling Bags, Military Equipments, Etc.
Gives a beautiful finish which will not peel or
crack off, smut or crack by handling. Not a varnish
Used by the U. S. Army and is the standard
among manufacturers and owners of fine harness
in every quarter of the globe.
SOLD BY ALL HARNESS MAKERS.

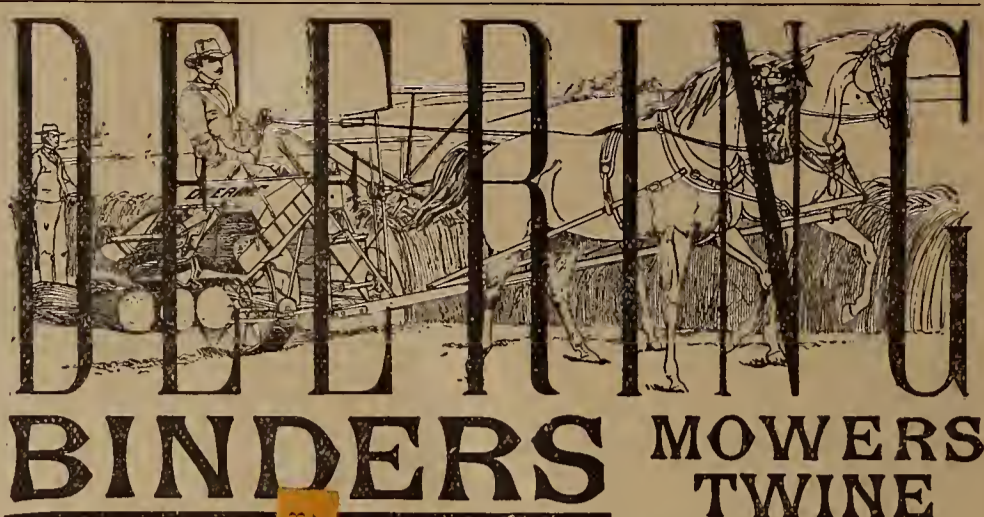
WARRANTED
THE BEST
Practical Stump
Puller made.

BENNETT'S IMPROVED
STUMP PULLER
Sent anywhere in the U. S.
On Three Days Trial.
On runners. Worked by 2 men.
LIFTS 20 to 50 TONS.
Five sizes. Price, \$35 to \$70.
Circulars free. Man'd by
H. L. BENNETT,
Westerville, O.
Mention this paper when you write.

MEND YOUR OWN HARNESS
WITH
THOMSON'S
SLOTTED
CLINCH RIVETS.

No tools required. Only a hammer needed
to drive and clinch them easily and quickly;
leaving the clinch absolutely smooth. Re-
quiring no hole to be made in the leather nor
burr for the Rivets. They are **STRONG, TOUGH**
and **DURABLE**. Millions now in use. All
lengths, uniform or assorted, put up in boxes.
Ask your dealer for them, or send 40c.
in stamps for a box of 100; assorted sizes.
MANUFACTURED BY
JUDSON L. THOMSON MFG. CO.,
Waltham, Mass.

Mention this paper when you write.

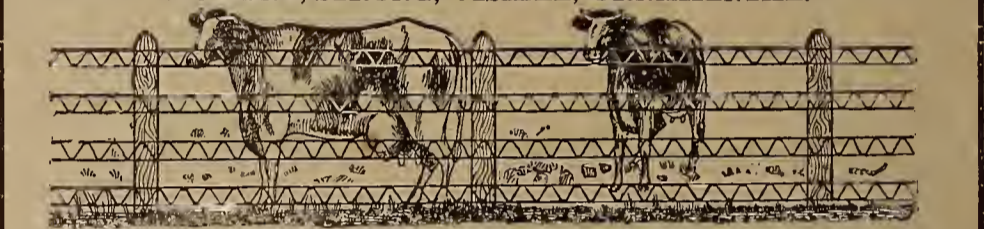


1891 SALES 37,665 MACHINES
AND TWENTY-MILLION POUNDS OF TWINE

GET A COPY OF **"CROSS, GRAIN & GAIN"** A BOOK
OF FOR FARMERS

DEERING AGENTS
EVERYWHERE
WM. DEERING & CO.
CHICAGO, U. S. A.

CHEAPER THAN BARB WIRE.
HUMANE, STRONG, VISIBLE, ORNAMENTAL.



HARTMAN WIRE PANEL FENCE.
Double the Strength of any other fence; will not stretch, sag, or get out of shape. Harmless to stock,
a Perfect Farm Fence, yet Handsome enough to Ornament a Lawn. Write for prices, Descriptive Cir-
cular and Testimonials, also Catalogue of Hartman Steel Picket Lawn Fence, Tree and Flower Guards,
Flexible Wire Mats, &c. **HARTMAN MFG. CO., Beaver Falls, Pa.**
Eastern Sales Agency, 102 Chambers St., New York; Southern Sales Agency, 51 and 53 S. Forsyth St., Atlanta, Ga.
T. D. Gause, General Western Sales Agent, 505 State Street, Chicago, Ill.

Always mention this paper when you write.



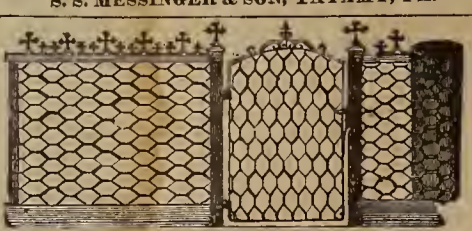
TIME IS MONEY
WHICH YOU CAN SAVE BY
USING THE
Queen Washing Machine
One washer sold at whole-
sale price where we have
no agent. For full particu-
lars and catalogue, address
The Buckeye Churn Co.,
P. O. Box 68, Sidney, Ohio.

WELL DRILLING MACHINERY,
MANUFACTURED BY
WILLIAMS BROTHERS,
ITHACA, N. Y.,
Successors to the Empire Well Auger Co.,
Mounted and on Sills, for
deep or shallow wells,
with steam or horse
power.
Send for
Catalogue.
ADDRESS
Williams Brothers
ITHACA, N. Y.
Mention Farm and Fireside.

Keystone
Cider Mills
Do more work, and from the same
amount of pulp produce
MORE CIDER
than any other Mill made.
Work Rapidly.
Run Easily.
COST LESS.
Send for circular.
KEYSTONE MFG. CO.,
Sterling, Ill.

SEPARATOR and POWERS

for 1, 2, & 3 horses, with governor, either level
or regular tread.
Get
our
Prices
and Cata-
logue of
Sweep Powers,
hand and power Corn Shellers, Feed Cutters,
Feed Mills, Steel Land Rollers, Chilled Plows, Mowers, Wood
Saws, Engines—3 to 15 Horse Power, mounted or on base plate.
S. S. MESSINGER & SON, TATAMY, PA.



Best Fences and Gates for all
purposes. Free catalogue giving
particulars and prices. Write
THE SEDGWICK BROS. CO., RICHMOND, IND.



CUTAWAY HARROW CO., SOLE MANUFACTURERS,
HIGGANUM, CONN. New York Office, No. 18 Cliff St.
WHITMAN & BARNES MFG. CO. GEN'L AGENTS,
CINCINNATI AND CHICAGO.

IDEAL In Name
and In Fact.
DEAL Steel
WIND MILL
and Three Post
STEEL TOWER.
The LATEST and BEST.
Sizes 8-9-12 ft. Geared.
10 nud 12 ft. Ungeared.
TOWERS, 30, 40, 50 & 60-ft.
Mills with or without graphite
bearings.
STOVER MFG. CO.,
507 River St., FREEPORT, ILL.



Buckeye Wrought Iron Punched Rail Fence.
Also manufacturers of Iron Creaming, Iron Turbine and
Buckeye Wind Engines, Buckeye Force Pumps,
Buckeye, Globe and Champion Lawn Mowers. Send
for Illustrated Catalogue and Prices to
MAST, FOOS & CO. SPRINGFIELD, O.

WHITMAN'S
BALING
PRESSES.
Always Victorious.
A FULL LINE.
Buy the BEST.
Send for Circulars.
Superior to all.
See our "NEW DEPARTURE" low price
FULL CIRCLE BAILING PRESS.
Largest Hay Press Factory in America.
WHITMAN AGRICULT'L CO., St. Louis, Mo.

Milk
PRESERVATIVE.
Milkmen, Creamerymen and Dairy-
men can keep Milk and Cream
fresh a week without using ice.
Healthful, tasteless, odorless and
inexpensive. **SAMPLE**, enough to
make test, mailed for ten cents.
The Preservative Mfg Co., 10 Cedar St., New York.



EASTERN EDITION.

VOL. XV. NO. 20.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, JULY 15, 1892.

TERMS {50 CENTS A YEAR.
24 NUMBERS.

The Circulation of FARM AND FIRESIDE
this issue is

250,700 COPIES.

The Average Circulation for the 24 issues of
the last 12 months has been

273,137 COPIES EACH ISSUE.

To accommodate advertisers, two editions
are printed. The Eastern edition being
100,300 copies, the Western edition
being 150,400 copies this issue.

**Farm and Fireside has More Actual
Subscribers than any Agricultural
Journal in the World.**

Current Comment.

SIDE by side, for comparative study,
we place the main planks of the Re-
publican and Democratic platforms
of 1892.

MONEY.

Republican.

The American people from tradition and interest favor bi-metalism, and the Republican party demands the use of both gold and silver as standard money, with such restrictions and under such provisions, to be determined by legislation, as will secure the maintenance of the parity of values of the two metals, so that the purchasing and debt-paying power of the dollar, whether of silver, gold or paper, shall be at all times equal. The interests of the producers of the country, its farmers and its workingmen, demand that every dollar, paper or coin, issued by the government, shall be as good as any other. We commend the wise and patriotic steps already taken by our government to secure an international conference to adopt such measures as will insure a parity of value between gold and silver for use as money throughout the world.

Democratic.

We denounce the Republican legislation known as the Sherman act of 1890 as a cowardly makeshift, fraught with possibilities of danger in the future which should make all of its supporters, as well as its author, anxious for its speedy repeal.

We hold to the use of both gold and silver as the standard money of the country, and to the coinage of both gold and silver without discriminating against either metal or charge for mintage, but the dollar unit of coinage of both metals must be of equal intrinsic and exchangeable value, or be adjusted through international agreement or by such safeguards of legislation as shall insure the maintenance of the parity of the two metals and the equal power of every dollar at all times in the markets and in the payment of debts; and we demand that all paper currency shall be kept at par with and redeemable in such coin.

We insist upon this policy as especially necessary for the protection of the farmers and laboring classes, the first and most defenseless victims of unstable money and a fluctuating currency.

Excepting the reference to the 1890 silver law, these planks are substantially the same. By their platforms both parties are now pledged against free silver coinage, except under conditions, such as the establishment by the leading commercial nations of the world of an international ratio between gold and silver, which would make it financially safe. Both favor bi-metalism. Both demand that every dollar, gold, silver and paper, shall be equal in purchasing power and debt-paying power. Both favor the coinage of silver under such legislative restrictions as will insure its parity of value with gold.

The statement that farmers and workingmen are the first and most defenseless victims of unstable money and a fluctuating currency is true, and deserves their most careful consideration.

TARIFF.

Republican.

"We reaffirm the American doctrine of protection. We call attention to its growth abroad. We maintain that the prosperous condition of our country is largely due to the wise revenue legislation of the Republican Congress.

We believe that all articles that cannot be produced in the United States, except luxuries, should be admitted free of duty, and that on all imports coming into competition with the products of American labor there should be levied duties equal to the difference between wages abroad and at home.

We assert that the prices of manufactured articles of general consumption have been reduced under the operations of the tariff act of 1890.

We denounce the efforts of the Democratic majority of the House of Representatives to destroy our tariff laws by piecemeal, as is manifested by their attacks upon wool, lead and lead ores, the chief products of a number of states, and we ask the people for their judgment thereon.

We point to the success of the Republican policy of reciprocity, under which our export trade has vastly increased, and new and enlarged markets have been opened for the products of our farms and workshops.

A very commendable feature of these planks is that neither one of them is a "straddle." They are bold, plain statements of principles that are directly opposed to each other. The Republican plank is a clear, moderate declaration in favor of a protective tariff, more moderate, in fact, than Republican legislation of the past. The Democratic plank is a concise, radical declaration in favor of a tariff for revenue only, more radical, in fact, than any Democratic legislation ever proposed. By declaring that the federal government has no constitutional power to impose and collect tariff duties except for purposes of revenue only, it places the Mills bill, the Morrison bill, and every other so-called tariff-reform measure ever offered in Congress, as well as the McKinley law, under condemnation. A bill logically drawn from this declared principle would place tariff duties only upon luxuries and necessities not produced in this country, such as diamonds, tea and coffee.

Tariff reform has been superseded by tariff for revenue only. The issue on this question of political economy is now clearly defined between the two great

Democratic.

We denounce Republican protection as a fraud on the labor of the great majority of the American people for the benefit of the few. We declare it to be a fundamental principle of the Democratic party that the federal government has no constitutional power to impose and collect tariff duties except for the purposes of revenue only, and we demand that the collection of such taxes shall be limited to the necessities of the government when honestly and economically administered. We denounce the McKinley tariff law enacted by the Fifty-first Congress as the culminating atrocity of class legislation; we endorse the efforts made by the Democrats of the present Congress to modify its most oppressive features in the direction of free raw materials and cheaper manufactured goods that enter into general consumption, and we promise its repeal as one of the beneficent results that will follow the action of the people in intrusting power to the Democratic party.

parties. They are drawn up in battle array squarely facing each other; on the one side, protection; on the other, tariff for revenue only, or so-called free trade. There can be no easy dodging. It is a fight to the finish. May the better win.

There is some interesting convention history about this tariff-for-revenue-only plank. At the Chicago convention the committee on platform submitted, as part of the tariff plank, the following:

"When custom-house taxation is levied upon articles of any kind produced in this country, the difference between the cost of labor here and abroad, when such difference exists, fully measures any possible benefits to labor. * * * * In making reductions in taxes, it is not proposed to injure any domestic industries, but rather to promote their healthy growth. From the foundation of the government, taxes collected at the custom-house have been the chief source of federal revenue. Such they must continue to be. Moreover, many industries have come to rely upon legislation for successful continuance, so that any change of law must be at every step regardful of the labor and capital thus involved. The process of reform must be subject in execution to this plain dictate of justice."

By a vote of 564 to 342 the convention rejected this resolution, and substituted what appears here in italics. The resolution offered by the platform committee affirms protection, and, as will be seen by comparison, does not differ materially from the Republican plank. By rejecting it and adopting the substitute, the Chicago convention turned the Democratic party about face, and squarely face to face with its enemy.

EXPERIMENTS with Sugar-beets in 1891" is the title of a bulletin recently issued by the department of agriculture, Washington, D. C. It contains full accounts of experiments in sugar-beet culture (1) by farmers in different parts of the country; (2) by the agricultural experiment station of Wisconsin and by farmers of that state under the direction of the station; and (3) by the sugar-beet station of the department located at Schuyler, Nebraska.

Published in this bulletin is an interesting letter from Henry T. Oxnard to Secretary Rusk, on the development of the sugar-beet industry and its present condition in the United States, from which we take the following:

The beet-sugar industry has become well established in Europe only within the last half century, and has become a great factor in the world's sugar supply within the past fifteen years, so that to-day more sugar is produced from beets than from all the other sugar-producing plants in the world combined. This result has been brought about within the last fifty years by the governments of Europe, chiefly Germany and France, subsidizing and encouraging the production of sugar to such an extent as to diminish the price of that article at least one half what it was ten years ago. The United States, as you well know, has, within the past year, by a wise provision of the McKinley bill, offered a bounty of two cents per pound for a limited period for all sugar produced in the United States, and by following the example of Germany and France can soon hope to become independent of the rest of the world for its supply of sugar, thereby keeping at home hundreds of millions of dollars sent abroad annually to enrich the farmers and manufacturers of foreign countries. The two cents given in the shape of a bounty by the United States government takes the place of the two cents which formerly existed as a tariff on the importation of sugar. The result of this legislation is, that the price of sugar since the law went into effect

has fallen two cents per pound, the consumer paying just two cents less than a year ago, and at the same time the development of the home industry has not been sacrificed, but encouraged; and that is not the only advantage we shall derive, as each factory, similar to the one we have built here, means an outlay of about half a million dollars, and the United States will require about a thousand of such factories to supply it with sugar in 1900. The building of these factories will start up the coal and iron mines as well as the machine-shops all over the United States, giving employment directly to thousands, and give a far greater impetus to our national prosperity than could be obtained in any other channel. We will also give our farmers an opportunity to diversify their crops, and we all know the advantage to be derived from that source. Under the old tariff the industry never thrived, but with the stimulus of the bounty, within the past eight months, beet-sugar factories have started or are about to be started all over the United States. At least twenty states are, in my opinion, well adapted to the sugar-beet. We have the soil, climate and capital necessary to become the greatest sugar-producing country in the world, and as soon as we have acquired the knowledge of the industry which will enable us to compete successfully with the countries of Europe, with the aid of the stimulus given by the last Congress, we can hope to lead the world in the production of sugar in the next fifteen or twenty years.

But the supply of the home article is not the only advantage to be gained. I refer to the effect of the beet crop on the soil. Properly carried on, the cultivation of the sugar-beet is greatly beneficial to all other agriculture. The deep and careful cultivation which the beet requires greatly improves the land, the soil becoming thereby deepened and the disintegration and solution of the mineral constituents greatly accelerated. The tap-root of the beet descends to a great depth, loosening the soil which most other plants fail to reach. The nourishment thus obtained passes partly into the leaves and is left with them on the ground at the time of harvest, and to-day in Europe the farmers are anxious to plant beets, as they find the next crop grown on the same soil is increased thirty-three per cent. The pulp, after the sugar is removed, makes an excellent food for fattening cattle, and can be sold to the farmers for little or nothing, after paying them liberally for the privilege of extracting the sugar.

We have in operation this fall three beet-sugar factories, each with a capacity of 300 tons of beets daily, besides which each factory uses about 50 tons of coal and 40 tons of limestone daily, spending in the immediate neighborhood of the factory each and every day upwards of \$2,000 amongst the farmers for the beets, and laborers working in the factory, keeping that amount at home, which formerly found its way to the pockets of the European farmers and laborers. This large sum is distributed in the community immediately surrounding each one of our factories, and the result has been to build up the towns where our factories are located as well as the surrounding farming district; these towns in turn build up the state. Since the establishment of our factories, in each community where situated the demand for labor has so far exceeded the supply that not a single individual wishing to work has lacked the opportunity of finding remunerative employment, either in the field or factory. The Oxnard Beet Sugar Company, located at Grand Island, Neb., was built and operated for a short time last year, working satisfactorily. This year (1891) our company has built two new factories, locating them at Norfolk, Neb., and Chino, Cal. Both of these factories commenced operations for the first time this year, and are now turning out a standard grade of fine, white, granulated sugar, which sells readily in competition with the sugars offered by the large refineries. We expect to manufacture 9,000,000 pounds of granulated sugar in our three factories this year. Besides ours, there are three other beet-sugar factories at present in operation, and the number will be largely increased next year, spreading over the northern and central portions of the United States. It is with pleasure that I can inform you, after a very careful study of the subject and practical trial of the same, that a most brilliant future and speedy development awaits this new industry.

FARM AND FIRESIDE.

ISSUED 1st AND 15th OF EACH MONTH BY
MAST, CROWELL & KIRKPATRICK.THIS PAPER HAS BEEN ENTERED AT THE POST-OFFICE
AS SECOND-CLASS MAIL MATTER.

TERMS OF SUBSCRIPTION:

One Year, - (24 Numbers), - 50 Cents.
Six Months, - (12 Numbers), - 30 Cents.The above rates include the payment of postage by
us. Subscriptions can commence any time during the
year. Send for Premium List and see premi-
ums offered for obtaining new subscribers.**Payment**, when sent by mail, should be made in
Express or Postal Money Orders, Bank-checks or
Drafts. WHEN NEITHER OF THESE CAN BE PROCURED,
send the money in a registered letter. All post-
masters are required to register letters whenever re-
quested to do so. Do not send checks on banks in
small towns.**Silver**, when sent through the mail, should be care-
fully wrapped in cloth or strong paper, so as not to
wear a hole through the envelope and get lost.
Postage stamps will be received in payment for sub-
scriptions in sums less than one dollar.**The date** on the "yellow label" shows the time to
which each subscriber has paid.**When money is received** the date will be changed,
which will answer for a receipt.**Discontinuances**. Remember that the publishers
must be notified by letter when a subscriber wishes
the paper stopped, and all arrearages must be paid.**When renewing** your subscription, do not fail to
say it is a renewal. If all of our subscribers
will do this, a great deal of trouble will be avoided.
Also, give your name and initials just as now on the
yellow address label; don't change it to some other mem-
ber of the family; if the paper is now coming in your
wife's name, sign her name, just as it is on label, to your
letter of renewal.We have an office at 927 Chestnut Street, Phil-
adelphia, Pa., also at Springfield, Ohio. Send your
letters to the office nearest to you and address

FARM AND FIRESIDE,

Philadelphia, Pa., or Springfield, Ohio.

The Advertisers in this Paper.

We believe that all the advertisements in this paper
are from reliable firms or business men, and do not in-
tentionally or knowingly insert advertisements from
any but reliable parties; if subscribers find any of
them to be otherwise we should be glad to know it.
Always mention this paper when answering advertise-
ments, as advertisers often have different things ad-
vertised in several papers.

Our Farm.

COMMENTS ON STATION LITERATURE.

BY T. GREINER.

BLACK-KNOT ON CHERRIES AND PLUMS.
—The March bulletin (1892, No. 40, new series) of the New York Agricultural Experiment Station treats on black-knot. This is a common and very destructive enemy of our plum and cherry trees, and requires heroic treatment. Since the publication of the bulletin, the New York legislature, in consequence of the demand of the leading fruit-growers of the state, has taken a hand in the game, and passed a law which aims at the eradication of the disease in the state by means of the destruction of diseased trees or parts of trees. It is true that remedial treatment, such as paring off the black warts and painting the wounds with turpentine, linseed-oil, etc., is often recommended by men whose opinions carry weight among horticulturists. Still, the only safe and sure way of dealing with the disease is cutting the diseased limbs or trees down and burning them promptly. Every man who grows fruit for profit or home use, it seems, might be expected to protect his property in such a way even without compulsion; yet indolence and shiftlessness get the better of most people in such cases, and thus we see the cherry and plum trees in whole sections black with knots. Even wild trees are covered with them. In such localities it would be a vain thing to attempt growing fruit-trees which are subject to the disease. The single grower, no matter how carefully and promptly he might fight the disease on his own premises, will have no show against the infection carried upon his grounds from his neighbors' fields. He must either induce his neighbors to cut down the diseased trees on their premises or let the cherry and plum business alone.

Surely, no person has a moral right to breed insects or disease germs by the million, and then distribute them over a whole neighborhood. The new law is intended to give New York state fruit-growers a chance to protect themselves against this kind of trespass on their premises, and to raise cherries and plums if they wish to. It requires the removal of every knot-infected branch or tree, and gives any person the right to cut down such infected trees wherever found, with or without the owner's consent. This, I think, is a wholesome law. It is simply in accordance with the principles of self-protection. It can also be enforced without much trouble. The disease is characteristic, and easily recognized. There is no doubt about its nature. It is a public nuisance. In these respects this black-

knot law differs from our peach-yellow law, which apparently cannot be enforced. The speedy destruction of every knot, on wild and cultivated trees, would be a blessing, and wipe out the disease in a few years. It would be a good thing for other states to follow suit. In the meantime, the way to exterminate the knot anywhere is to destroy the diseased parts promptly, and where the law does not require this action, an agreement between neighbors and voluntary, concerted proceeding in the direction indicated will prove just as effectual.

The bulletin gives the following advice: Trees not badly infested may be treated by cutting off affected branches some distance below the knot. This operation is best performed in the fall, immediately after the foliage drops, because the winter spores are not formed at that time, and consequently there is less danger of their being disseminated in the operation, and also because the work can be done more thoroughly when there are no leaves to hide the knots. The summer spores must also be taken care of in their season. As soon as there are any indications of the formation of a new knot in the spring or during the summer, the branches on which it occurs should be cut and burned. The first outbreak will probably be noticed about the middle of May. It is important to note that if a branch containing the knot be cut from the tree and thrown on the ground, the spores will ripen in due time, just the same. Therefore, the practice of collecting carefully and burning every knot cannot be too strongly urged.

The bulletins of the Massachusetts experiment station contain reports of some experiments in the application of various substances for the purpose of destroying the knot. Kerosene, turpentine, linseed-oil, sulphate of copper, and a mixture of red oxide of iron and linseed-oil are mentioned among the substances tried. These seem to be effective in destroying warts to which they are applied to saturation, but care must be used with the turpentine and kerosene, or the entire branch will be killed.

POTATO-BLIGHT.—A number of our experiment stations have recently reported on the diseases of the potato, and on the means of fighting them. I believe the New Jersey station mentions a form of blight which is comparatively new, and as yet little understood. This blight has given me much trouble for years: in fact, I have hardly had a crop for five or six years except what was shortened by this leaf-blight. This first attacks the tip-end of the leaf, which curls under and gradually dies and wastes away, until nothing but bare stalks are left. Finally, these die also. Naturally, this premature dying of the foliage prevents the tubers from reaching their full size. No rot of the tuber follows this blight. It is not a mildew, like the regular potato "rot" blight. How to fight it is the question. The Bordeaux mixture has proved reasonably effective as a remedy for the one; whether it will prevent the other, also, as is fervently hoped, remains to be seen. This new blight appears earlier in the season than the "rot" blight, and treatment should be begun at once. Corrosive sublimate, in a one-tenth-per-cent solution, sprayed on the foliage repeatedly, might be tried.

I believe that spraying with any of these fungicides will tend to keep the bugs in check, also. Especially is this thought of the Bordeaux mixture; but if the bugs do survive it, the Bordeaux mixture can easily be made to "kill the two birds with one stone" by the addition to it of a little Paris green. Let me again repeat the formula for the Bordeaux mixture: Dissolve six pounds of sulphate of copper (blue vitriol or bluestone) in two gallons of hot water, in a wooden vessel; then slake four pounds of fresh lime in two gallons of cold water, and when cool, carefully pour one mixture into the other, stirring it well, and add forty-one gallons of water (and one fourth of a pound of Paris green, if vines are bug-infested). This is about the proper strength to apply with a regular sprayer. Should you wish to put the liquid on by means of an ordinary garden sprinkler, you may still further dilute it by adding twenty to forty gallons of water. This year, from present appearances, seems to be a fungus year. It will be advisable for every

grower of potatoes, celery, and of every other crop of vegetables or fruits that is subject to the attack of fungous diseases, to seek safety in spraying with these remedies.

THE K. W. T. D.—Prof. Wm. F. Massey, of the North Carolina agricultural college, has favored me with a copy of his published lecture, "The Know What to Do; or, Brains versus Muscle." His leading thought in this lecture is to show the value of an education. He begins with an instructive little story: A mill-owner employed a cheap engineer. One day something went wrong, the machinery stopped, and several hundred employees were idle for a while, as the engineer could not find the cause of the trouble. At last the owner called an expert, who repaired the damage in a few minutes and charged: To work in starting machinery, \$1; to K. W. T. D., \$19; total, \$20. The mill-owner paid the bill, but asked about the K. W. T. D. "Oh," said the expert, "I charged you \$1 for the work, but the \$19.00 for the *know what to do*."

This same principal runs through all professional work. The physician may make you a five-minutes call, give a little inexpensive powder or tincture, and charge you \$5 or \$10. This he can do simply because he knows what to do. The lawyer may charge you \$100 for conducting a lawsuit that employs his time for a day or two, and the client will not find fault, because the lawyer knows just what to do in order to meet the case creditably and win the day. But we have similar cases in farming. One farmer has a cow get bloated in the near clover-field, and loses her because he does not know what to do; another has had plenty of experience and been reading papers and books, and knows where to insert the knife, and saves the cow. One sells his crop for half price because he is not posted as to its value, the best market, etc.; another sells at an extra price because he is informed about the exact conditions of the market and where he can find the best demands for his products. So it is, all along. The premium is an education. A good education is a most excellent investment—better than land and houses and cattle. You may lose the land and the houses and the cattle, but if you are sure of the K. W. T. D., you will have no trouble in making a comfortable living without having to work your muscle from early dawn until nightfall, and until you are tired enough to die. By all means give your children this priceless boon—a good education—rather than concentrate all your efforts upon this one thing, to lay up a few dollars that often prove more of a curse than a blessing. Put your children into the way of taking care of themselves, and they will be better taken care of than if they inherited a few thousand dollars. "See the children of the rich," says Ingersoll. "What a punishment for being rich!"

FOREIGN WOOL.

ITS RELATION TO AMERICAN MANUFACTURES.

During recent years, in every discussion of the wool tariff, it has been repeatedly asserted that manufacturers need a certain proportion of foreign wool to mix with our domestic product in order to secure the best results. The intent is to offer a reason for purchasing a foreign rather than a domestic supply, by intimating that we are unable to produce some class or classes of fiber which must be had. It is even gravely alleged that American wool growers are to be benefited by these foreign purchases, the argument being that if manufacturers are allowed this privilege, they will need more American wool with which to mix this essential foreign leaven. During the last winter this stalking horse was on parade duty during the whole discussion of the free wool proposition which passed the national house of representatives.

It may be noted that no one using the argument has ever set forth in what particular American wool has been found deficient, nor dilated upon the special characteristics of this foreign wool which makes its use imperative. Neither has any one pointed out the particular line of manufacture which languishes for want of wool grown in otherlands. Particulars like these have been avoided and only glittering generalities doled out, sometimes backed by the endorsement of a nameless "prominent wool manufacturer,"

quite as apt to be a creation of the brain of the airy romancer as otherwise. If these little points, which, if proven, would put the question out of the realm of discussion, were presented in the place of bare allegation, the matter would be settled at once by expert testimony. But this test is wisely avoided by those relying upon the argument.

Even in its nebulous state, however, the falsity and hollowness of the plea may be easily shown. This country possesses every advantage for the successful production of all necessary classes of wool. Its flocks are the equal of any in the world, and far superior to those of countries producing the wool of international commerce. Based upon the merino breed, the best characteristics of the blood have developed here, and even Australia comes here rather than to Europe for the improvement if not the foundation of her flocks. A distinct type of the merino race has been developed which is not excelled, if indeed is equaled, by the development of this blood in any other country, and the average of our flocks approaches nearer, and nearer this type. The extent of this improvement is shown by the fact that there has been a steady and marked increase in the density and weight of the fleece, the average advancing from 1.9 pounds in 1840 to 2.7 pounds in 1860, and not less than 5.5 pounds at the present date. This makes our fleece one of the heaviest in the world, only slightly exceeded in weight by that of Great Britain. With superior blood, we have every range of climatic and other conditions suitable to the production of every grade of wool, and failure to recognize this fact is a wilful misrepresentation or an unjustifiable lack of knowledge of the marvelous resources of our country.

The impression is sought to be created that our domestic supply of wool is largely inadequate to the demand, and that this condition is growing worse. The contrary is true. No wool manufacturing country of the world has so large a proportion of domestic wool as this, and the proportion is steadily increasing. In 1860 the per capita supply of wool used in our manufactures was 3.4 pounds; now it is 6.6 pounds, and the proportion of this made up of our own product has advanced from 2.3 pounds to nearly 5 pounds during the same period. We are the third in rank among wool manufacturing nations, falling but comparatively few pounds behind Great Britain, which is second, and in 1890 domestic wool made 69 per cent of our supply. In France, the nation using annually the largest amount of wool in its manufactures, the domestic supply was only 27 per cent, and in Great Britain it made only 35 per cent. In Germany, the country fourth in rank, it was even less, amounting to only 17 per cent of the supply. This does not indicate that our manufactures are lagging for lack of a plentiful wool supply, nor is it any indication of a paucity in the supply of any particular grade necessitating a resort to foreign wools. It is rather an indication of superiority both in resources and in quality of wool at their command. While the other countries named are forced to import from two thirds to five sixths of what they use, taking the wools of the world from hot climates and nomadic agriculture, harsh, weak or uneven in staple, two thirds of ours comes from our own flocks. Our advantage is even more marked than these figures indicate. More than 72 per cent of what we import is carpet wool, so that, excluding carpets and considering the manufacture of fine woollen goods, the clothing of our people, and we produce probably 90 per cent of what we use. No other manufacturing country approaches us in supply and quality offered.

A further examination of the records of our imports will reveal the fact that when manufacturers go abroad for wool, they are not seeking some particular quality which they cannot get at home, but are after cheap wool. The material brought in as carpet wool during the past eight years has averaged in value 11.4 cents per pound, while combing-wool during the same period cost 23.5 cents. This accounts for the fact that only 6,000,000 pounds of this class has been bought. Of merino wool, which makes up the bulk of our production, the imports have averaged but 24,000,000 pounds. This shows that it is not special grades or peculiar qualities,

but cheap wool that is wanted. The necessity for mixing is mythical, for sophistication rather than combination.

Another misstatement which has been persistently repeated, sometimes by manufacturers themselves who have an object to serve, is as to the amount of foreign wool which we import in the form of woolen goods. It has been largely overstated by different parties for different reasons. With some it has been a desire to belittle American manufactures, and with others a desire to make a special plea for cheaper raw materials, in order to better meet what is called a threatened competition. It has been repeatedly claimed that we receive 200,000,000 pounds of wool each year in this form, and sometimes statements have recklessly gone beyond this. The public has been seriously and intentionally misled on this point, and it is time that the facts were known. During ten years past we have imported woolen goods, including carpets, to an average annual value of \$43,345,981. The greater part comes from Great Britain. During the same period that country has paid 21.8 cents per pound for the wool she has imported and out of which she has fashioned these goods. If her capitalists charged nothing for time and direction and the use of mills and money, her operatives gave their labor and her ship-owners brought the goods to our shores free of charge, the total money we spent would buy only 198,000,000 pounds of such wool as she bought. But Great Britain does not do business that way. In 1880 the census returns show that in our own woolen manufactories the wool used amounted to but 42 per cent of the value of the product. In British manufactures, after allowing for the notorious adulteration, the lower cost of labor might possibly increase the percentage of wool to one half the value of the product. On this basis our imports of wool in the form of woollens average less than 100,000,000 pounds. This gives us an annual consumption of about 500,000,000 pounds, of which we manufacture four fifths and produce about three fifths.

The necessity for going abroad for a wool supply is not apparent in view of these facts. It would rather seem to be the policy of all interested, manufacturers especially, to foster by every means the domestic industry, to the end that our present even, steady supply of high-grade wool may be continued, to the mutual advantage of growers, manufacturers and consumers. If the harmonious relations which have so long existed between growers and manufacturers are not disturbed, this country will soon take its place as the first in manufacture, as it is already first in consumption, and the advance will not be at a sacrifice of its present high standard of quality.

B. W. SNOW.

CHOICE OF LOCATION.

BY JOSEPH.

My remarks about being "only a renter" has brought me various communications of sympathizing friends. They all tell me that good land can be had—for sale or rent—quite cheaply. These letters are not all from southern friends, either. One comes from Chautauqua county, New York, and tells of a 100-acre farm, good land, good markets, etc., that can be bought at \$13 an acre. As a further proof of good will and true sympathy, the writer of this latter epistle offers to "help out with ready cash" should want of money only stand in the way of my buying this farm and becoming his nearest neighbor.

I feel thankful for these friendly suggestions and offers; but if these friends should ever make me a visit (and I hope they will) they would most likely discover that a person who knows how to make the most of circumstances surrounding him can live pretty comfortably and enjoy a real home, even if he is "only a renter."

Of course, I do not "move" very often. When business considerations take me to town, where I am most likely to stay for some years, I take my time in looking around until I find just the place for rent that most nearly suits my taste, and then I secure it—I might say at any cost. After that, I stay on that place until "business" calls me to some other place, and right from the start I begin to arrange things

as I want them, never hesitating to go to a little expense, when by such means I can contribute to the comfort of myself and family. Somebody may have a part of the benefit of my labor or money outlay, after I am through with it; but this will be the case anyway, whether I rent or own a place, and it is only a question of a few years, more or less.

I am well aware that there are many acres of fine land waiting for a buyer, not only in Arkansas, Virginia and other southern states, but also in many northern locations. Often, good lands can be had for an almost nominal sum. A person who wants to buy a farm, and is not particular about the locality, can well afford to look around a good deal, spend a few dollars in traveling, etc., and try to find just the place he wants. But don't buy poor land. Rather get one half the number of acres, or even less, and let it be productive soil that is easily cultivated. And be sure to have a good, near market for your produce. Sometimes there are special opportunities; as, for instance, near large cities, watering-places or pleasure resorts. Right here, near Buffalo and Niagara Falls, for instance, prices for the products of the garden, the poultry-yard, the dairy, etc., are usually good.

Much, on the other hand, depends on the man and the methods he practices. The farmer who does not make a success in one locality is not likely to do much better by moving from place to place, trying it here and there, and engaging in one thing one year and another thing another year. Learn to do one thing well, and then stick to it right through. Every climate, every locality has its advantages and disadvantages, and so has every particular branch of farming. Success is possible everywhere and in every undertaking, if you only go at it in the right way.

I do not believe in "moving," except for urgent reasons. Make as good choice of a "home" as possible, and then stay there until you die. This course would be the one I would prefer for myself, and if I had no other business entanglements I would possibly investigate some of the suggestions offered by my friends, with an eye of selecting a farm. But "I am not a free agent like any of you," and for the present will have to be contented with the position of "a renter."

CATCH CROPS FOR SHEEP.

There is no question more important, nor more neglected, in establishing a thrifty, profitable sheep industry in this country, than a system of agriculture that would afford an abundant, perpetual food supply from birth to death. If this were sought out wisely, and persistently followed, all the anxieties and doubts as to how to make sheep raising pay would be settled. The question of permanent pastures, that shall not fail in supplies during the certain or probable drouth of summer, becomes the more serious question as lands increase in value and the mania for grain crops increases. It is of the highest importance that this supply of food should be at minimum cost. Economy must be kept in view while securing an extravagant food supply. The study of catch crops is of urgent interest to sheep raisers. The catch crop is one grown outside of the regular rotation practiced on the farm. It may well mean, too, a crop grown in connection with any crop that may not be damaging to its growth, market value or maturity.

A list of such crops is too large to repeat here, but would include rape, turnips of several varieties, with special adaptation to climate, peas, beans, sweet corn, wheat, rye, oats, sorghum, millet, clover, and especially scarlet clover.

Some of these can be grown in connection with other crops, and others after crops are out of the way. Wonderful results may be gotten by a little intelligent industry and forethought, when once experiments in this direction are begun on a farm. Some of the crops named here are looked upon as regular farm crops, too valuable to be classed as forage crops. This, too, is a great mistake, though so taught by the fathers. The value of any crop depends upon what it costs to grow it. When grown cheap enough, any crop may be used as an economical feeding crop. Beans may be grown on rye, wheat

or oat stubble. If of early varieties, and the land is rich and the season favorable, a large amount of valuable food may be cheaply obtained in beans. Corn-field beans may be planted with corn, or when the corn is up, without much damage, and add immensely to the value of corn fodder as food for stock. The beans may be left on the vines and give a grain-ration value to the fodder. Cow-peas may be raised and fed the same way. Rye, wheat and oats may be sowed in the corn at last cultivation of the crop, and results will be prodigious. The winter pasturage obtained will be so satisfactory that the practice will be kept up ever afterwards.

On fertile land, turnips will give a proportionate crop that is not to be omitted. Our skill or our climate does not suit turnip raising so well as our Canadian neighbors or English farmers; but we shall find this easier when we find the profits that belong to the crop. They often do quite well—at least, give considerable pasturage—when sown in the corn at last cultivation. There are winter sorts that live through the winter, and give a late and early growth of top quite toothsome to sheep. They are valuable, though a little troublesome, as they continue to occupy the land. This is one of the really good things that stays.

Sweet corn, sorghum and millet can follow potatoes or small-grain crops with great advantage.

The last to be mentioned here is scarlet clover (*Trifolium incarnatum*, or French clover). This is an annual, seems adapted to winter pasturage, as it grows when no other plants do, affording abundance of pasturage. It is sown in the peach orchards of Delaware in July, and matures by May 10th, making an enormous yield of green forage, which may be cured into valuable hay or preserved in the silo, making splendid ensilage. It is sown in corn at last plowing, and no crop can surpass it in pasturage or as an ensilage crop. It need not interfere with raising successive crops of corn; the same land, with this plant, can give two crops a year without loss of fertility to the soil.

A most important catch crop for the fattening of sheep and lambs will be given attention in another article on rape, the culture of which is destined to revolutionize and give importance to the mutton industry of this country.

These thoughts cannot be looked upon by any thinking man as the most idle theories that come under the head of "book farming." "The man who makes two blades of grass grow where only one grew before has been recognized as a benefactor of his race." The man who shall make two crops grow on the same land, and so use them as to make the land better and at the same time produce a crop of mutton and wool, should be recognized as a progressive, thrifty agriculturist and a true patriot. There are plenty such, here and there, in progressive regions of the United States, and there are none who may not find the way to something that shall answer their purposes for the same results.

Corn-fields and stubbles are left to grow up in weeds and grass—evidences of unthrift and ignorance; evidences of the fall of man from purity and divine favor, when industry and enterprise could cause plants suited and needed for animal food to grow in their stead. The thinking American agriculturist is a progressive man. The possible is attempted and the impossible of our fathers is now attainable. The old ways are not suited to the new conditions that have come to us. Progressive ideas are forced upon us; agricultural sciences show the way; intense farming is still profitable, and we must join the grand, triumphant procession or drop out of the way, a failure.

R. M. BELL.

WATER AND IRRIGATION.

In buying a farm, or land for a farm, the important consideration is the water supply. Land may be made fertile, buildings may be renewed, but if the water supply is deficient and cannot be increased, the place is doomed as an all-the-year-round farm. In spring, fall or winter it may, however, serve some agricultural purpose.

But usually the water supply may be increased. In time of drouth reports come of farmers who must depend on

their neighbors or use pond water. In many cases the lack of water is due to the negligence of the farmer—to his failure to provide water that may be his for the digging. Said a farmer: "If this man had put as much money into wells or rams as he has into bay-windows and dormers, he'd have water enough."

The question of irrigation may never be what it is or has been in the West, but some attention is given to it by farmers who work with heads as well as hands. It is true that in some seasons there is more rain than the earth needs, and it is true, also, that often crops grow less and disappear for lack of moisture. If the question of water supply be considered as it ought to be, and is settled satisfactorily, it may be assumed that it is sufficient for all house and barn uses.

Having, then, a never-failing source of water, it is easy to arrange a system of irrigation. Indeed, with such a system, the farm may be planted to accommodate it, the crops likely to need water the most being within reach of the supply. The hydraulic ram is considered expensive machinery. It is true, the cost of sinking the pipe may exceed the cost of the ram itself, but whatever the cost, if it provide water the year round, the value of the farm is increased many times the cost of the ram, even if no attempt is made to use it for irrigating purposes. There are not many farms, probably, where a ram may not be introduced.

The plants on any farm thrive through June, take a firm hold on life and give promise of an abundant harvest; but in July and August, in a dry time, they begin to wilt, and like starving men, grow pale and weak. The farmer looks on in alarm. He cannot resist the impulse to bring water from the house for a part of the field. How sudden is the transformation! How the rich, green color comes back, and how the plants stretch forth in all their former vigor! Ah, if the whole field could be watered!

Well, he may let the entire field drink. A farmer planted within reach of a ram. The water came to the house and the overflow ran to the barn. He tapped the pipe at the house, and by hose and wooden troughs led the little stream throughout the planted area. The cost was in the ram, several hundred feet of hose and wooden troughs made on the place. It was easy work. The hose, reeled and on wheels, was attached to the supply pipe and run along the edge of the field, and the water turned into the troughs lying between the rows.

If there be a will and a well or spring, there's a way to coax the earth to a full display of its power.

GEORGE APPLETON.

THE OLD AND THE NEW.

The old idea was, a sheep was current at one dollar a head, as good as a trade dollar. The produce of the flock was a coarse, hairy fleece of two or three pounds and a lamb once a year no better than its mother.

Now, a sheep that is worth keeping must give a fleece of eight to twelve pounds, a lamb that will weigh from fifty to seventy-five pounds at six to twelve weeks old, and if possible, a second lamb six months later.

Beside these, the value of the manure from a sheep is worth to the fertility of the farm one dollar a year; some estimate it higher. Again, to this account add what it would cost in cash to destroy weeds, briars and brush, say from one to two dollars a head. These figures are not unreasonable, and are verified on many well-managed farms by progressive agriculturists.

R. M. BELL.



Mr. J. B. Emerton.

Hood's Sarsaparilla

So promptly and effectually overcomes **THAT TIRED FEELING**, as to conclusively prove this medicine "makes the weak strong." J. B. Emerton, a well known merchant of Auburn, Maine, had **Dyspepsia** complicated with **Liver and Kidney** troubles. He took **HOOD'S SARSAPARILLA** and it gave relief and great comfort. He says: "It is a God-send to any one suffering as I did."

HOOD'S PILLS cure Habitual Constipation by restoring peristaltic action of the alimentary canal.

Our Farm.

COMBINED SUB-IRRIGATION AND DRAINAGE.

Cole's combined system of sub-irrigation and drainage is quite expensive to put in, but when once done it is permanent and gives wonderful results. The system is founded on good, practical common sense. It is especially adapted to the Pacific coast, and to the vast arid interior where good water is the one precious thing. Those arid plains and hills have the richest of soils, most delightful, healthy climates, grand scenery, and water rightly used gives all the rest. But it is precious; every obtainable drop of it should be stored up and made to do its whole duty in the most economical form.

The Cole system, or something like it, seems to be the only safe and economical way of utilizing water. You eastern people hardly understand the strength of using that word in the above connection. The present mode of surface irrigating land on this coast is not safe, for in all cases in dry climates (without heavy rains in winter) it eventually kills the soil by the constant accumulation of alkali. The alkaline salts of many kinds accumulate on the surface of the soil until it reaches such quantity that it is entirely impossible for crops to grow on it at all. First the cereals, the bread-makers, go, then all other plants in succession until the barren alkaline plain is the result, on which no life can exist. Every acre on this western coast, or rather west of the Missouri river, now under irrigating waters at present, are on this old land-killing system of surface irrigation.

All mountain waters carry a trace of these injurious alkalis. Some carry a large amount. They have been flowing into the valleys for countless myriads of years, and there to a large extent evaporated by the heat of the sun and drying winds, leaving the alkali in and on the soil. All these valleys have their soils mixed with alkali to unknown depths, but not in so great an excess, generally, but that crops will grow finely on them for several years; in many cases for long periods. But in all cases, the time eventually comes when crops cannot be grown, for the irrigating water is constantly bringing down more alkali, the ground saturating, and the water dissolves the alkali already in the soil, and as the water evaporates, the alkali is left directly at the soil surface, where by its chemical corrosive action it eats off or decomposes the cellular structures of the plant at the surface of the ground.

Surface irrigation is not safe in rich valley soils, for the reason that the evaporations from the open ditches, stagnant pools and moist soil causes a humid atmosphere, which generates that greatest curse to the Anglo-Saxon race in rich countries, known by the general term, malaria, with all its attendant miseries. Surface irrigation in arid regions is also exceedingly wasteful of the precious water. It has been estimated that only one gallon in ten which is brought to the plains by that system is utilized by the crop plants, the other nine gallons being evaporated or sinking down beyond the reach of the plant. With such irrigation and drainage, all of these evils and wastes and the annoyances and disagreeable labor of putting the water on and shutting it off are remedied. All the alkalis being freely soluble in water, are carried off through the underdrainage to the ocean, which nature designed for their store-house.

Therefore, if your block of land is not a rich, deep, well-drained, alluvium or a light, rich, deep, well-drained sand or sandy loam, your first task for the best results would be to tile-drain it, at least thirty inches deep; when thus drained, you can grow anything that your cool, moist climate will give heat enough to mature. Next, it should be plowed as deep as possible—the deeper the better. Then if as rich as the average of California valley soils, it will need no manure whatever, except it be for certain garden vegetables, and for very few of them. Small fruits and tree fruits are very impatient of manures on this coast. More fruit gardens have been ruined by them than benefited. Good plows, cultivators, harrows, hoes and rakes, kept constantly bright by daily use, are our very best manure piles. Then when trees and

plants are dormant in winter, let the grass, weeds and what-not grow at will; encourage them, and if there are not seeds enough to grow a crop of them, sow something that will grow, such as peas, hardy beans, lupins, rye, wheat, oats, rape, anything that grows strongly in winter, to be plowed neatly under before the trees start in spring; if very wet, plow a little late. Alfalfa is one of our very best plants for this green winter manuring. It should be allowed to seed in early autumn and then be harrowed in.

Next, procure one year from bud dwarf trees of the species you want, carefully plant them, packing the soil thoroughly and firmly around the roots, being careful to have the union of bud and stock (root) from one to four inches above the surface of the soil when planted, as follows:

Apple on paradise stock; plant four to six feet apart each way; when planted, cut the trees back to eight inches; if there are any branches below where cut, cut them to three or four inches. Start three to five branches; rub all others off as they start. When the branches have made a foot of growth, pinch out the tip of each; when they have made another foot of growth, pinch again. These branches are what I call the sub-branches. At the winter pruning cut all the branches back to a foot in length except the upper one, leaving that sixteen inches; on it are to be formed the main permanent branches. The next summer treat exactly the same way, except on the lower or sub-branches you let all grow at will, but pinch back the leading shoots; that is, any twigs or fruit spurs forming on them, of course, are not interfered with. By autumn we will have three to five main upright twigs growing from the upright shoot of the summer before. These can generally be nicely arranged for permanent branches by a little care in early spring, rubbing out all buds but those wanted to grow, care being taken to distribute them at equal distances apart. Then at the next winter's pruning, where the lower or sub-branches were cut the winter before, we will find from one to four branches or twigs growing from near where cut. If only one, it is to be cut back to four inches; if two, one cut to four the other to two inches, the same pruning to be done on the upper main branches, and so on from year to year, though constantly shorter with age; if more, they are to be cut out smoothly, and so on year after year. If you wish a pyramidal growth or form to your tree, you constantly leave the central upright twig the longest. If you prefer trees with a broad base, you repress the upright shoot by cutting it the shortest; and recollect that the essential points in this system of pruning, which is absolutely perfect for all fruit-trees, especially on this coast and in every other portion of the world, modified only for standard trees in orchard culture by pruning longer, or 8 and 16 inches instead of 2 and 4 or 3 and 6 or 6 and 12, is that a twig, bud or branch is never to be cut out smoothly from the inside of the head of the trees; they may and should be cut back to one and four inches, but never cut out, for right there on those little twigs and spurs is where you get your first and subsequent crops of good fruit. It is always good, provided this next essential point is strictly and constantly attended to; namely, the cutting back and thinning out as above, the outward and upward surfaces of the tree's head. Plant all other trees on the stocks named, and treat exactly as for the apple, except in pruning, which should be in leaving the one outward or upward shoot, say for the pear, ten inches; if two, one five the other ten.

Pear on Anger's quince stocks, cut back when planting to 12 inches; prune as for apple, 5 and 10; plant 6 to 8 feet apart. Prunes on Mariana plum stock, same as pear; plant 6 to 8 feet apart. Plums, same as prunes. Apricot, same as prunes, with constant, thorough summer pinching, on Mariana plum stock.

Peaches are the most difficult of all fruit-trees to train. Plant Mariana plum, cut back to twelve inches. Start three to five branches, and in July, bud varieties of peach wanted into the branches, one to two inches from the trunk; pinch back constantly in summer; winter pruning, 6 and 12; the pyramidal or cone form is best for the peach. Nectarines, same as peach. Cherry, one-year trees on Mahaleb stock, cut back to one foot and prune 6 and 12.

Using standard or free stocks will not do so well as on the dwarf stocks named, but they must have perfect, constant or intensive culture, and not be allowed to suffer in the least for moisture or plant food. The moisture, if your soil is deep and good, can be had by thorough culture, though the late fruits may need extra moisture in July and August. The one other essential point for perfect, lasting success is never to let your trees overbear, or mature too great a crop of fruit. As a rule, here in California, fruit-trees, old and young, set two, three or four times the fruit they can mature with safety to their vigor and future usefulness.

If these short directions, that I have tried to give plainly in the fewest possible words, are strictly carried out, your little block of fruit-trees, not only for a few years—as dwarf trees are generally considered only to be useful for—but for many, will give you more good fruits than any other block of land of its size ever did in North America, provided, always, that you plant the right varieties and that your climate and soil are as good for fruit as I think it is.

D. B. WIER.

THE DYSPEPTIC FARMER.

One of the surest crops in the country, on the farm, is dyspepsia. It crops out among the hard workers, but has not so great an affinity for those who "take things easy."

The daily life of the typical New England farmer is suggestive of indigestion and dyspepsia. When the farmer is in a hurry—and the farmer who hurries at all hurries all the time—the question of meals is secondary. "I must finish plowing this lot, first," cries the farmer in response to the summons to dinner; "I won't take long—only a few furrows more." And he finishes. In his hurry he breaks a trace or snaps a plow-point, and tired and hungry, frets the more. It is nearly two o'clock before he gets to dinner. He eats in unusual haste to make up for lost time, really bolts his food, and hurries away to his work. Moreover, he has upset the household arrangement. His wife and daughters were to make calls in the afternoon, but now one must stay at home to clear the table and wash the dishes, or all wait, and flushed and heated, find less, perhaps no enjoyment in doing what they had planned.

The farmer drives on almost as long as he can see, and then has the chores to do. It may be eight o'clock, perhaps later, before he finds the supper-table, for he does not believe in going to supper until the day's work be done. After, there is an attempt to read the paper, but the farmer falls asleep over it, and at nine is in bed. No wonder dyspepsia waits on this man; the wonder is that he lives out half of his days.

The practice of this farmer is similar to that of thousands in New England, from plowing to harvest time—an early breakfast, a snatch of dinner in twenty minutes, and the supper at the end, wherever it may come. If breakfast was at seven, dinner at twelve and supper at six, and this regularity was observed strictly, even if the hurried manner of taking meals was not changed, there would be an improvement—an improvement that would add years to his life.

A well-to-do farmer, in the busiest time of the year, after dinner every day lies down on the lounge for a few minutes—five or twenty, as the time will allow. Why? Simply to relax the muscles of the body and give a few minutes of absolute rest. The benefit of this complete surrender for even five minutes is incalculable.

Some of our farm workmen, especially the imported kind, light their pipes and stand or sit in restful attitudes, but the man who wants to get the most out of his hour or half hour at noon lies flat on his back. He is nerved to greater effort in his work, and does the work with greater ease.

Another factor contributing to dyspepsia is found in the two-meal system that rules on Sundays. Breakfast a little later than usual, and then dinner—the only other meal of the day—at three or four o'clock, or after the family come from church and Sunday-school held after the morning service, and have time to prepare the meal. Irregularity is the disturbing factor here. Three meals on week days

and two on Sundays, with long waits between, especially for the younger members, interferes with digestion and frets the mind. If not so much be required on Sundays, when no work is done, then whatever is eaten should be taken at the same hour. The farmer who wishes to get the most out of his horses or oxen, feeds regularly. Why should he not treat himself as well as his animals? The two-meal system on Sunday makes Monday as well as Sunday an uncomfortable day to many sufferers.

GEORGE APPLETON.

OF INTEREST TO FARMERS.

With the acknowledged value of corn fodder as feed and the necessity for saving it, has come a machine for doing the work economically, and the inventor and first person to make a practical machine was a farmer, J. E. Peterson, of West Mansfield, Ohio. Being a practical man, and aiming to advance the interests of farmers generally in protecting them from inferior machines put on the market by irresponsible parties, he has placed his patent in the hands of leading manufacturers of this class of machinery, granting to them the exclusive right to manufacture under his patents, pledging them also to make only first-class machines, and further requiring that they prosecute all infringers, his object being in this way to secure to farmers the best possible machines for doing the work. It is therefore of the greatest importance to every farmer purchasing a machine to cut his corn that he sees to it that the stamp of The American Corn Harvester Association appears on the machine he buys, which is a guarantee as to the value of the machine itself; also as a protection against lawsuits.

EXTRACTS FROM CORRESPONDENCE.

FROM IOWA.—Clear Lake is a prosperous village of fifteen hundred inhabitants, and it is a great summer resort for all lovers of boating, fishing and outing through the hot summer months. Methodist camp-meetings and musical festivals are held here through the months of June, July and August. The county has some timber and is a rolling prairie. The lake is three miles north and south and seven miles east and west, with a ground bottom and sandy shore. The spring was late, wet and cold, but crops are looking fine. Hay will be a full crop. Stock is looking well. There is some prairie land for sale yet, at from ten to fifteen dollars an acre. Improved farms sell for from twenty-five to fifty dollars an acre, according to improvement and location. Soil is rich, and water good and plentiful.

Clear Lake, Iowa.

H. A.

FROM CALIFORNIA.—I saw an article from H. M. H., California, in which he says a laborer or farm-hand has to furnish his own bedding and sleep in a barn, or other outhouse, both summer and winter. True, they are supposed to have their own blankets, and some do sleep in barns, but not as a general rule. Many farmers build a house (a bunk-house it is called) for their men to sleep in. They are warm and comfortable and usually have either a fireplace or stove, where they can sit on rainy days. These accommodate from ten to thirty men. I have been a farmer's wife for twenty years and know of what I write. Times are not so good for laboring men (or any class for that matter) as they were a few years ago, but a steady, industrious man can nearly always get work. The winter season is the busy time, for as soon as the rains come, usually in November, and sometimes earlier, plowing and seed time commences, and continues till the last of March. I am speaking of the ordinary years, not dry ones, which occur occasionally.

San Benito, Cal.

A. P.

THIS PAPER

One Year Free

To any one sending us only one NEW yearly subscriber at the regular price, 50 cents, for the paper alone.

This offer is good now under the following conditions:

The NEW subscriber must be a person whose name is not now on our list, and must be a person whom you have sought out and solicited to take the paper and who has consented to receive it. A change from one member of a family to another is not securing a NEW subscriber.

The new subscriber will receive the paper a full year for the regular subscription price, 50 cents, but will not be entitled to any present or premium with it except upon payment of the full "Price, including one year's subscription." For example: the beautiful picture, "Columbus at the Royal Court of Spain" and this paper one year for \$1; or, "Uncle Tom's Cabin" and this paper one year for 60 cents.

Send us a new subscriber under these terms and we will send you the paper free for one year as your reward.

This offer must not be combined with any other, and applies to this paper only.

Accept it now, while it is good. It may be withdrawn.

We have an office at 927 Chestnut Street, Philadelphia, Pa., also at Springfield, Ohio. Send your letters to the office nearest to you and address

FARM AND FIRESIDE.
Philadelphia, Pa., or Springfield, Ohio.

Our Farm.

NOTES FROM MY HOME GARDEN.

BY JOSEPH.

PLANT SUPPORTS.—Poultry netting has been recently recommended as a suitable support for peas, etc. This, of course, involves not a little expense, and for this reason I have opposed its use except by people with whom expense is of small consideration. Still it cannot be disputed that this material makes a fine trellis or support, is easily put up, and after being once procured, can be used for many years.

I bought a lot of this poultry netting, a foot wide, at \$1.15 for a roll of 150 feet. I also got another lot two feet in width. Either of it is good and serviceable. Posts are set firmly about twenty feet apart, and the netting put on about six inches above the ground. To give more strength and support, I put two pickets of an old discarded picket fence between each two posts, simply driving the pointed end into the ground. Of the narrow (one foot) netting I put one strip above the other.

Such a trellis looks very well, and I think is strong enough to stand firmly during the season. I imagine it will be quite ornamental when covered with sweet-peas, morning-glory, tall nasturtiums and other climbing plants, or with Lima beans either.

I have not tried this netting for ordinary peas, but am sure it would be just elegant. Of course, the narrow size, if held about six inches up from the ground, will be just wide enough to give support to any of the first earlies on rich ground, where, with me, they grow from two to three feet high.

I will give this a trial yet this season, for although the end of June is near, I shall yet sow a row or two of peas for late use, depending on spraying with the sulphide of potash (liver of sulphur) solution to keep off the mildew. Some of my early peas were given support by twigs from my orchard trimmings, cut about eighteen inches long, and stuck in from four to six inches apart all along the row. They hold the vines up quite nicely, and the latter, loaded as they are with well-filled pods at this time, are quite a sight. It is not much trouble to brush peas in this way, and it certainly makes cultivation as well as gathering the crop so much easier and more convenient that the trouble of brushing is repaid two or three times over. It also admits of planting closer, and makes the whole patch look much more attractive.

While on this subject of early peas, let me say that I cannot find any noticeable difference between any of the various "first-early" smooth peas which I am trying. All of them have the same foliage, grow to about the same height, are equally productive, and as good generally.

There is, however, a newer wrinkled sort, Nott's Excelsior, which is a decided step in advance. It is almost exactly as early as any of the "first earlies," with larger pod and larger pea, and of course much sweeter and richer, as are all the wrinkled peas.

THE STRAWBERRY CROP.—We are now in the midst of the strawberry harvest, which seems to be somewhat late this year. The Wilson, usually so reliable, thrifty and productive here, is sadly affected with leaf-blight, and will give but a partial crop. Most other varieties are healthy in leaf. The Bubach and Haverland are our best berries. The former gives fruit of immense size, and the latter an immense quantity of medium-sized berries. I know nothing better in strawberries for home use and near market than these two. Of course, they are somewhat soft, and will not carry well for long distances.

The mammoth specimens of Bubach are especially subject to bruising. But, for a home market or home use, the Haverland and Bubach are not easily surpassed. Of course, perfect-flowering sorts must be planted with them. I use Wilson and Long John for this purpose with good effect.

Usually pistillate varieties will bear some berries, even if such perfect-flowering sorts are not planted with them. Almost all pistillate sorts develop at least a few stamens, which provide pollen, and often there are wild strawberry-plants in the

vicinity which yield pollen in great abundance. Still, it is not safe to plant pistillate sorts alone. To insure a full crop we must plant some of the perfect sorts with them. Long John, of which I have spoken so favorably before this, lacks health this year. The originator knew exactly how to handle and pet it, and he had excellent success with it. But it is at least a success as a pollen producer, and I like to plant it with pistillate sorts.

Parker Earle has been highly spoken of. With me, on rather clayey soil, it does not show that health and thrift of foliage for which it is noted elsewhere. Evidently it needs a lighter, warmer soil than I could give it. The variety is rather late.

THE POTATO CROP.—I have just made a big lot of Bordeaux mixture, and the potato-vines will receive their first spraying to-day. I am bound to keep the various blights off if I can. Potato-bugs are also plenty again this season. The Bordeaux mixture does not seem to agree with the bugs, and I think will give them a serious set-back, even without the Paris green addition. But to make the thing sure, a little Paris green should be mixed with it for potatoes. If properly made, there is not much trouble in the preparation of the spraying mixture, nor in its application. I have made enough of the Bordeaux mixture (6 pounds sulphate of copper dissolved in 10 gallons of water; 4 pounds fresh lime slaked in 5 gallons of water; the two solutions mixed under lively stirring, and 30 gallons of water added) to last me nearly all the season. I use it as required, adding the Paris green (a heaping teaspoonful to each knapsack sprayerful of the Bordeaux mixture) just before use. I will also try the liver of sulphur solution.

A new and as yet undetermined leaf-blight, which begins at the tip of the leaves, curling them up, and finally ending in the destruction of the entire foliage, has cut my potato crops short for a number of years, and I hope we will be able to find something to stop the disease and save our crops. On the whole, the present year seems to be a fungus year. This is bad for our crops, but it may be a good thing for our knowledge of how to treat the various diseases successfully.

HIDDEN POSSIBILITIES.—I have had some fine second crop cauliflowers grow on the same roots which had already yielded one good head. In some cases we may put this tendency to produce secondary crops to good use, not only with cauliflowers, but with cabbage and lettuce as well. If we cut the first well-formed head out with some care, leaving the stump to stand, the latter will usually make a new effort at producing secondary hearts. If only one of the young sprouts is allowed to grow, you will soon get a second head, and it may be even better than the first one was. We should try some of these hidden possibilities.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

STRAWBERRY VARIETIES.

W. F. ALLEN, JR.

The strawberry season of 1892 is about at a close, and I will give the readers of FARM AND FIRESIDE a little of my experience with the different varieties. Almost my whole time is devoted to the strawberry, and but few varieties of any prominence escape my notice. Over one hundred varieties are now growing on my strawberry farm, but some of them are not yet sufficiently tested to warrant a report. My object is to give a true and accurate description of the different varieties, as I have found them by actual experience, for the benefit of the growers and not to overpraise new varieties for the benefit of the introducers. I shall aim to make my descriptions short and to the point.

Michel's Early is, without doubt, the finest very early variety grown. It is of large size, excellent flavor and productive. A little soft for distant market, but as it comes so early it will stand shipment better than others equally as soft coming later in the season. It is a vigorous and healthy grower, and generally satisfactory everywhere.

Hoffman is also a very early variety, generally well known, and perhaps the firmest berry grown. It will stand to ship almost any distance and arrive in market in good condition. A great many have

the Hoffman that are badly mixed; these are unsatisfactory, but those who have it true generally find it profitable. It is not very productive, but its earliness and carrying qualities make it profitable.

Stevens is a good, solid shipper, and very much resembles Hoffman; it is a little more productive, but the plant is not so healthy. The time of ripening is about the same as Hoffman and Michel's Early.

Westbrook is early, productive and firm, and will average about the size of cherries.

Bessie is a vigorous grower, medium size, second early, firm, and only moderately productive.

Beder Wood—Early, fine form and color, large size and very productive, moderately firm.

Barton's Eclipse—Early, very large and productive, firm, good quality and a healthy grower.

Lovett's Early is only medium early, and not very early, as has been claimed by its disseminators. It is, however, a good market berry, above medium size, productive and firm.

Meek's Early, originated in Baltimore county, Maryland, is very early, of large size, firm, productive and a free grower. Plants as large as Bubach No. 5. It promises to be very valuable.

Acme is early, of good quality, hardly medium in size, and from one year's fruiting I am not inclined to think it very productive.

Price Seedling is a fairly productive, medium-sized, early kind.

Monmouth is a good early berry, good size and firm; also productive. The plant is, however, a poor grower.

Bidwell is a good berry on springy, rich land, early and large size.

Alabama is large, soft and unproductive with me. Some of my neighbors, however, say better things of it.

Tippecanoe is a medium early, and perhaps the largest berry grown, but not productive enough for general cultivation.

Belle of Lacrosse is not what it was claimed to be. If it does no better another season I shall discard it.

Lady Rusk seems to be fairly good.

Pearl is a fine second early market berry, of large size, good color and form, productive and firm. It rusts some during summer, but this does not seem to affect it during fruiting season.

Clark's Early is a medium early, round berry, only moderately productive, a little above medium in size, and is a good berry.

Early Idaho, I believe, is identical with Clark's Early.

Anna Forest is on the Monarch and Viola style.

Woolverton is a large, productive variety, and is very firm for so large a berry, and a first-class variety to plant with large pistillate kinds. Very valuable. From Canada.

Saunders is from the same source as the Woolverton, and is another valuable berry, being early, firm, of large size and productive.

(Concluded in next issue.)

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Salt on Strawberry-plants.—J. H. R., Centralia, Ill. Common salt in any form is of doubtful value as a fertilizer, and applied in considerable quantities to the soil is very destructive to all our fruit crops. However, many lands in the West are somewhat benefited by small applications of salt. Were I in your place I think I would try the salt on strawberries, using not over five hundred (500) pounds to the acre. This amount will not hurt anything if put on evenly and cultivated in, and it may prove to be very beneficial. Be sure to leave a part of the bed without any, so as to note the effect of the application.

Ants on Young Trees.—J. W. W., Haverstraw, N. Y. The ants probably go up the cherry-trees to get the honey-dew exuded by the lice that live on the tree, or else for gum which the trees throw out when injured by borers or when diseased, or else for the broken ripe fruit, and they do not hurt the trees at all. They will generally be found even on the most healthy cherry-trees in New York, and I doubt if there is a large tree anywhere but what has some ants on it throughout its growing season, and they will be especially numerous when the fruit is ripe and the birds have commenced to eat. Ants or other climbing insects may be kept out of trees by wrapping a strip of heavy building-paper around the trunks and partly covering the same with coal-tar, or what is better, a cheap form of printing ink. Care should be taken that the coal-tar does not get on the bark, as it is very injurious there. Ants do not lay their eggs in the trees, but in the ground.

Blackberry Rust.—J. B., Elyria, Ohio, writes: "I have about one acre of blackberries. They are the Snyder, Taylor, Stone's Hardy and Ancient Briton. I find a few bushes tinted with a yellow dust. What is it, and what is the remedy? The land is clay soil, not under-drained; the water runs off the top good."

REPLY:—You undoubtedly have what is termed blackberry or raspberry rust. It is one of the commonest and most striking of our fungi. It produces at first a stunted and

yellowish appearance of the shoots attacked, which is soon followed by the development of the spores in brilliant patches on or entirely covering the under side of the leaf. When a plant is once affected with it there is no alternative but to pull it up and burn it, since the vegetative threads of the fungi live over winter in the stalks and from them penetrate the foliage and growth in the spring. If all the spores that ripen were to grow and each one become a center of infection, the raspberry and blackberry business would be destroyed. As it is, the disease generally spreads slowly, but surely. The best plan, if practicable, is to give up blackberry culture near infested places for a year or two until the land is free from the disease. Anyway, burn all infested plants as soon as they appear and keep the land in good cultivation. Some varieties are much more subject to attacks of it than others, and plants that are weakened by poor soil or other adverse condition are more liable to its attacks than those growing under favorable conditions.

Making Fruit-trees Ornamental—Grafting Peaches—Apple Sprouts.—H. D. J., Ontario, Ohio. In regard to making fruit-trees ornamental, there is hardly a fruit-tree we have but that is beautiful when growing healthily and well formed. The reason why they are not popular for this purpose may be that the associations which go with apple, pear, peach and other fruit-trees are rather mundane. And then a great objection to using any fruit-tree as a street tree is that they are so often broken and disfigured by marauders. The point you make that some trees can be made more ornamental by having their branches tied down to stakes is a good one. Some of our fruit-trees do not need this treatment. The Rhode Island Greening and the Roxbury Russet, for instance, generally spread and their drooping branches touch the ground, while Northern Spy is rather stiff in form. A better way than tying to stake is to tie one or more stones or other weights to the branches, which will bring them down gradually as they grow. This is a plan that it is well to follow with the weeping slippery-elm, to give it the regular form. Of course, a tree with this drooping habit is chiefly valuable as an ornamental tree on the lawn, and is a nuisance as a street tree or in the orchard.—General experience is to the effect that peaches do best on peach roots on upland. If they are to be grown on moist land they will stand best on plum roots. It would be far better for you to bud your plum stocks with peaches in August than to try to graft them next spring. I hope we can hear from some of the readers of FARM AND FIRESIDE who have had experience with peach on plum for upland.—If you want to make an old apple-tree sprout, the tree should be cut back severely during the winter. They will then send out a lot of buds all over the trunk in the spring. But I do not see what you want to do this for, as such sprouts are not generally worth bothering with, anyway, in Ohio. However, as I write this an exception occurs to me in the case of an orchard of Wealthy apples, in Minnesota, which was nearly killed to the ground by a severe winter following a season when the trees over-fruited. The trees in this case sprouted from the stump, and in three years produced a magnificent crop of fruit that sold for nearly two dollars per bushel.

ARE YOU BILIOUS?

THEN USE

PARSON'S PILLS.

"Best Liver Pill Made"

Positively cure BILIOUSNESS and SICK HEADACHE, all Liver and Bowel Complaints. Put up in Glass Vials. Thirty in a bottle, one a dose. They expel all impurities from the blood. Delicate women find great benefit from using them. Sold everywhere, or sent by mail for stamps: 25 cts. five bottles \$1.00. Full particulars free. I. S. JOHNSON & CO., 22 Custom House St., Boston, Mass.

THE STRANGER Evaporator

Fruit & Vegetable. For family use and small fruit growers. The Best and Cheapest in the market. Price \$3.50, \$6 and \$10. Circulars free. EASTERN MFG. CO., 257 S. 5th St., Phila., Pa. Mention this paper when you write.

CIDER

MACHINERY.
POWER SCREW
HYDRAULIC OR
KNUCKLE JOINT
Graters, Elevators, Etc.
Boomer & Boschert Press Co.,
99 W. Water St., Syracuse, N. Y.

SEED WHEAT FREE.

Wilson's Fall Catalogue for 1892 containing price list and description of new and most productive varieties of Seed Wheat, White Rye and Winter Rust-proof Oats, Fruit Trees, Small Fruits, Strawberry plants, Asparagus roots, &c., for Fall planting. Also thoroughbred land and water fowls, mammoth bronze Turkeys, registered Pigs, German Hares, &c. Catalogue with five samples of best kinds of Winter Wheat sent FREE on application. Address

SAMUEL WILSON, Mechanicsville, Pa.

A PERFECT COOLER. DON'T HAVE

A PERFECT Aerator.  A PERFECT COOLER.  **SOUR MILK**
USE THE
CHAMPION
MILK
COOLER
and you Need Not.
It is for the use
of the farmer im-
mediately after
milking, and re-
moves all the animal
heat and odors at
once.
WE GUARANTEE
that milk will keep
from twenty-four
to thirty-six hours
longer by its use.
EASILY CLEANED.
Never gets out
of order.
Patented January 26th, 1892. Prices according
to size of dairy, \$7 to \$10. Send for our descriptive
leaflet. Reliable agents wanted everywhere on lib-
eral commission. Address,
Champion Milk Cooler Co., Cortland, New York.

Our Fireside.

THE DENTIST'S CHAIR.

I start from home with a quickened pace
And rush as a runner that runs a race,
But the raging tooth within my head
Gives way for a moment with awful dread
Of the knock and the shock and the wailing woe,
Of the victim that must to the dentist go;
For who has not felt the fearful scare
Of the first approach to the dentist's chair?

The doctor speaks, and a gentle smile
Suffuses his well-pleased face the while;
A dentist's smile would seem a sin
When you think of the torture this patient is in.
"A beautiful day," he remarks, a truth
No one would know with an aching tooth;
No day is fair to one in despair,
Writhing in pain in a dentist's chair.

He told me to open my mouth, but lo!
He opened it for me ere I could know,
With skilled finger and thumb that knew no awe
Of tender lips or of fractured jaw;
I never knew that the mouth could be
Opened so wide for another to see,
As mine was wrenched to my dire despair,
When I sat at first in that dentist's chair.

He hewed at my teeth, and it seemed to my soul
Like a miner hewing a block of coal;
He touched the nerve and the agony fleet
With lightning speed went down to my feet;
I could feel in that flash of fearful pain
My nerves, my spine, my muscles, my brain;
We are fearfully made, and I felt it there
As I suffering sat in the dentist's chair.

He placed a grindstone small to the bone,
But the biggest grindstone ever known
Couldn't feel as big as that whirling wheel,
While the pains were flying like dust from meal,
As he sent it whizzing and whirling still
Till my head was just like a rolling mill,
And I felt that I could any agony bear
If once I was out of that dentist's chair.

The cavity, near as I could tell,
Was about as deep and as wide as a well,
But he filled it, gilded it, smoothed it so
That the microbes could not into it go;
And I looked and I saw to my great surprise,
That gilded tooth was no great size,
And I learned, 'tis well to brave and to bear
As I had done in the dentist's chair.

—Rev. J. P. Hutchinson, in *Iowa State Register*.

THE COMMONEST POSSIBLE STORY.



PHILANDER ATKINSON, bachelor of law and writer of light verse, sat one murky August evening in his hall bedroom, with the gas turned low, wondering whether the night would be too hot for sleep. A quarter

before ten a loitering messenger-boy brought him a blue from his friend Darnel: "Come around at once. Just back. The very greatest news." Thereupon Atkinson discarded his smoking-jacket, reluctantly exchanged his slippers for shoes, and took the car down to Twelfth street, remembering meanwhile that Darnel's brief vacation from the Broadway bank expired that day, and speculating as to the nature of the great news which the clerk had brought back from Vermont. The lawyer was a Vermonter too, and it was this fact, as well as a common literary ambition, that had drawn the young fellows together at first, long before Philander, on the strength of having two triolets paid for, had moved up to Thirty-first street. Philander Atkinson liked Darnel, admired his feverish energy and his pluck, envied his acquaintance with books. He had always persisted in thinking that Darnel's stories would sell, if only some magazine would print one for a starter; and he had patiently listened to most of these stories, and to some of them several times over. Yet Darnel had never had any luck; had never had even his desert; and the sincerity of his congratulations whenever Atkinson's verses saw the light always caused Philander to feel a trifle awkward. He knew that the indefatigable clerk had two or three manuscripts "out"—out in the mails—when the vacation began, and as he turned in at Darnel's boarding-house he had almost persuaded himself that *The Aeon* had accepted "Laki," his friend's Egyptian story. It was a long climb up to Darnel's room, and the writer of light verse mounted deliberately, being fat with over-much sitting in his office chair. On the third floor the air was heavy with orange flowers and Bonsilene roses, and a caterer was carrying away ice-boxes. A whimsical rhyme came into Philander's head, and he made a mental note of it. Just then Darnel appeared, leaving over the the balustrade of the fourth floor landing, his coat off, his collar visibly the worse for the railway journey, and an eager smile upon his thin, homely face.

"Hullo, D., said Philander. "Here I am. Been having a wedding here?" he added in a low voice, as he grasped Darnel's hand.

"I believe so. I'm just back. Come in, Phil. You got my message?"

"Why else should I be here, old fellow? Is it 'Laki,' sure?"

Without answering, Darnel led the way into his tiny room. His trunk lay upon the floor, half unpacked, the folding-bed

was down, for the better accommodation of some of the trunk's contents, and the desk in the corner, under the single jet of gas, was covered with piles of finely-torn paper. Darnel's manner, usually nervous and somewhat conscious, betrayed a certain exhilaration, but he was under perfect self-control.

"'Laki?'" he said, seating himself in his revolving chair and whirling around to the desk, while Atkinson threw himself upon the bed, "'Laki?' Ob, I had forgotten. It's probably here."

He pulled over the mail accumulated during his absence. "Yes." He tore open the big envelope. "'The editor of *The Aeon* regrets to say,' etc.," and he tossed the printed slip, with the manuscript, into his waste-basket, with a laugh.

Atkinson's heart sank. Poor Darnel; it was not a cheerful welcome home. But Darnel was busied with his letters.

"And here are the others," he went on. "I thank the Lord none of them were accepted." "What!" exclaimed Philander, turning upon his elbow.

Darnel looked at him with a puzzling smile. "That's why I sent for you," said he. "Phil, all that I've been writing here for three years is stuff, even in reading over with a shaking voice some of that same 'stuff.'"

"I have learned the great secret," Darnel added, quietly. "You have Aladdin's ring?" said Atkinson. "Or are you in love?" "Both," replied Darnel. "It is the same thing."

Philander flung himself back upon the pillow, with a little laugh. "Go ahead, D."

"I have found her, and myself. Let me turn down the gas a little; I see it hurts your eyes. I belong in the world now; I am in the heart of it—I said to myself coming down the river this afternoon—in the heart of the world." He lingered over the words. "Phil," he exclaimed, suddenly, "all the time I was trying to write I was really trying to lift myself by the boot-straps. I was laboring to imagine things and people, and to get them on paper. It was all wrong. Do you remember that French poem you read me last winter, about the idol and the eastern princess, how she lay on her couch sleeping—the night was hot—with the bronze idol gazing at her with its porphyry eyes, while her brown bosom rose and sank in her sleep, and the porphyry eyes kept staring at hers—staring—but they never saw? Well, I believe my eyes have been like that. In 'Laki,' now, you know I wanted to describe the exact color of the stone in the quarry, and asked the Egyptologist up at the museum to tell me what it was? He laughed at me. Very well. It was a dull-red stone, with bright-red streaks across it; I saw the same thing in Troy this afternoon, when a hod-carrier fell five stories and they picked him up from a pile of bricks."

"You are getting rather realistic," muttered Philander. Darnel was not looking at him, and went on unheedingly:

"I have but to tell what I see. I have stopped imagining; my head has ached—Phil, you don't know how it has ached—trying to imagine things. I am past that now; if you only shut your eyes and look, it is all easy. Take that old Edda story that I tried to work up, about the fellow who fought all day long against his bride's father, and when night came the bride stole out and raised all the dead men on both sides, by magic, so that the next day, and every day, the battle raged on as before. I used to plau about the magic she used, and tried to invent a charm. Why, all she did was to pass over the battle-field at night, where the dead lay twisted in the frost, and while the wolves snarled around her and the spray from the fiord wet her cheek, she stooped to touch the dead men's wrists; and they loosed their grip upon broken sword and split linden shield, their breath came again, soft and low like a baby's, and so they slept till the red dawn."

"Look here," said Atkinson, sitting up very straight, "you've been reading 'The Finest Story in the World,' and it has turned your head."

"Oh, the London clerk who was conscious of pre-existences, and forgot them all when he fell in love? I could have told Rudyard Kipling better than that myself." Darnel gave an impatient whirl to the revolving chair.

"You mean you think you can," replied Atkinson, sharply.

"As you like." He spoke dreamily, and Atkinson dropped back on the pillow again, watching his friend as narrowly as the dim light would allow. Hard work and unearthly hours had told on Darnel; he certainly seemed light-headed.

"Sickening heat—black frost—" he was murmuring; "marching, stealing, fighting, toiling—joy, pain—the life of the race—is a man to grow unconscious of these things in the moment that he really enters the life of the race, that he feels himself a part of it? What do you think, Phil?"

"I think," was the slow reply, "that whatever has happened to you in Vermont has shaken you up pretty well, old fellow. They

say that when some one asked Rachel how she could play 'Phedre' so well, she just opened her black Jewish eyes and said, 'I have seen her.' And I think in the mood you are now, you can see as far back as Rachel or anybody else. It's like being opium-drunk; if you could keep so, and put on paper what you see, you could beat Kipling and all the rest of them. But you can't keep drunk, and you can't write prose or verse on love-delirium. It's been tried."

"Suppose Rachel had said, 'I am Phedre?'" Atkinson lifted his stout shoulders, laughing uneasily. "So much the worse. I should say, the less pre-existence of that sort the better. You might as well tell me the whole story, D. What is her name?"

"In a moment. She loves me, Phil. She is waiting for me in her little house among the hills. I left her only this morning, and soon I shall go back and leave New York forever. I can write the story up there—the story I have dreamed of writing—for I shall always have the secret of it. I have but to shut my eyes and tell what I see; and it is because she loves me. All the life of the past—I can call that 'A Story of the Road.' Then there will be the future to write of—the men and women that are to come; for we shall have children, Phil, and in them—"

"You're making rapid progress," ejaculated Philander.

"—I shall know the story of the future. Even now I know it. I do not simply foresee it, I see it. Why not 'A Story of the Goal'! For I belong to it—do you not understand? Yet, after all, what is that compared with the present? It shall be 'A Story of the March'! Look there!"

He threw his eyes up to the ceiling, which was brightened for an instant by the headlight of an elevated train as it rushed past.

"Do you know what that engineer was really thinking of as he went by? That would be story enough. Or what was in the heart of the bride-to-night, down on the third landing—you smelled the orange flowers as you came up? To feel that your heart is in them, and theirs in you—"

But Philander Atkinson was not listening to the lover's rhapsody. He was thinking of a certain summer when he, too, had had strange fancies in his head; when his thoughts played backward and forward with swift certainty; when he had grown suddenly conscious of great and deep affluities, and for a space of some three months he had dreamed of being something more than a mere verse-maker, a master of the file. Then—whether it was that she grew tired of him, or they both realized that some dull mistake had been made—it was all over. There was still in his drawer a package of manuscript he had written that summer, in blank verse, none too noble a form for the high thoughts which filled him in a queer new rhythm, too, the secret of whose beat he had caught at and then lost, for the lines read harshly to him now. He looked these things over occasionally, as a sort of awful example of himself to himself, though he had gone so far as to borrow some of their imagery, not without a certain shame, to adorn his light verse. His card-house had fallen, but some of the colored pasteboard was pretty enough to be used again. Curiously, he found that he could cut pasteboard into more ingenious shapes than ever since his brief experience in piling it; fancy served him better after imagination left him; his triolets were admirably turned, and his luck with the magazines began. Altogether it had been an odd experience; half those crazy ideas of Darnel had been his two years before, but he was quite over them—yes, quite—and now it was D.'s turn. He listened again to something that Darnel was murmuring.

"And she is an ordinary woman—one would say a common woman. That is the mystery and the glory of it. I do not know that she is even beautiful. There must be thousands of women like her; I can see it plainly enough, that there must be thousands of women in the world like her." There was a reverent hush in his voice.

Atkinson choked back an exclamation. Was D.'s head really turned? "A common woman"—"not know whether she is beautiful?" A face rose before him, unlike any face in all the world, eyes with the blue of Ascutney, when you look at it through ten miles of autumn haze; hair brown as the chestnut leaf in late October; mouth—

Philander trembled slightly, and rising to his feet, stood looking down at Darnel, haggardly. It was quite over, that experience of two summers before, but while it lasted he had at least never dreamed that there were thousands of women in the world like her.

"Sit down, Phil, I am almost through. A woman like other women, and the story, when I write it, a common story. It will be the commonest possible story; common as a rose, common as a child. I am going back to Vermont, where I was born, and where I have been born anew. There will be plenty of time for the story—years, and years, and years. I have only to close my eyes some day, and she will write down all I tell her, and I shall call the story hers and mine."

But Atkinson still stood, his hands in his pockets, his heavy figure stooping, the lines sharpening in his face, while he watched the rapt gaze of Darnel, and dearly reflected how strange it was that a woman should open all the gates of the wonder-world to one man's imagination, and that some other woman

should close those secret gates, quietly, inexorably, upon that man's friend.

"Wait," said Darnel. "Must you go back to your triolets? Let me show you her picture first." He turned the gas up to its fullest height, and held out a photograph.

It was the same woman!—*February Scribner's*.

A UNIQUE HOSPITAL.

An absolutely unique hospital is that situated on the shores of the lovely Tegernsee, in Tyrol. The house-surgeon and the four Sisters of Mercy in charge of this establishment are all of royal birth. The pure air of the mountains and the complete absence of dust are two of the most powerful agents of rapid recovery for the two to three thousand patients who come yearly to have their eyes treated by the owner and doctor-in-chief of the hospital, Duke Karl Theodore, of Bavaria. The duke has founded this beautiful institution for poor people, and he has operated wonderful cures in the past years. His lovely wife, the Duchess Marie Jose, infanta of Portugal, is the guardian angel of the house. Her abnegation and entire devotion to the sufferers, who come from all sides to be treated by her husband, together with her extreme beauty and gentleness, endear her to all. At six o'clock in the morning she arrives at the hospital to assist the duke during the operations, which take place in the early morning.

Dressed in a plain white serge gown, her silky braids almost concealed under a little round lace cap, she cheers and encourages the sick by her mere presence. It is she who administers the ether, who dresses the wounded eyes, and who, with untiring patience, spends many hours a day reading aloud to the poor wretches lying with bandaged eyes on the snowy beds of the different wards. She superintends the whole establishment herself; no detail escapes her attentive eye, and twice a day she makes a round of the kitchens, pantries, still-rooms and laundries, to convince herself that all is going on well. The food served to the patients is extremely good; every imaginable dainty is given to them. Fowl, fish, game, hot-house fruit, old and generous wines, form their diet. The duchess has caused huge musical-boxes to be placed in every ward, thinking with right that to people who have lost the use of their eyes music is always a consolation, and whiles away their long, dreary hours of darkness.

This year the duke has performed two hundred and sixty-two times the operation for cataract, and, wonderful to relate, has been absolutely successful in every case. Nothing can give an idea of the admiration and love felt by all the duke's patients for himself and his beautiful consort. The royal couple spend the spring months in Meran, where, through their exertions, the number of blind men, women and children has diminished by thirty per cent during the last five years.

The duchess is assisted in her work of mercy by her step-daughter, the young Duchess Amelie-Marie, and by the two beautiful daughters of the heir-presumptive to the throne of Bavaria, the Princesses Aldegoude and Marie-Ludwig, who are nineteen and twenty-one years old, but who prefer to the glare and pomp of court life, the quiet and peaceful existence they lead on the shores of the Tegernsee, tending the suffering and helping the poor, to whom they consecrate their fresh young lives.—*Harper's Bazar*.

A HAMMOCK FOR THE SICK.

The bed hammock is a most refreshing bet-terment when pillows obstinately refuse to "lie easy" or have grown hotly wearisome. To make it, take a bit of very stout cloth—linen is the best—a yard deep and four feet long after a double hem has been turned two inches deep across each end. Sew a length of webbing stoutly to each of the four corners. Sew two light rods, each a yard long—a small broom-stick makes excellent ones—in the hems. Put a stout screw-eye in either end of both rods, pass the webbing through the eyes, and your hammock is complete.

To use this bed hammock, all that is required is to fasten the webbing to the bedpost on either side, then the sick person can recline at ease against the cloth. Where the bedstead has high foot-posts the hammock can be slung to them quite as well. On very many accounts it is often desirable to "change the head" of the couch. This hammock affords almost infinite variety of position. Its angle can be shifted to any degree. It may be padded with a cushion, or left cool and single. By help of an air-cushion it will give ease to the aching muscles of back, sides and shoulders. Or the patient may sit so upright in it to eat his dinner as almost to give himself a sense of health and well-being.

Sick Headache
jaundice,
liver complaint,
biliousness, and
dyspepsia,
cured by

Ayer's Cathartic Pills

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.

WHAT WOMEN CAN DO.

There was a young woman in Indianapolis who took some bolting-cloth, which is a silk, gauzy fabric used in the manufacture of flour, firm in texture and beautiful to the eye. On this she painted some native hoosier plant, roots, stem and flower, and sent it to an exhibition in this city. Nothing of the kind had ever been seen before. Correspondence was opened with her, and it led the way to many orders and much money for the young woman.

Another western girl got sheets of chamolais and made them into portieres, which she painted in Indian fashion and strung with beads. This was sent to New York and placed in an exhibition where originality is sure to be appreciated, and she, too, prospered by means of orders for curtains to be hung in Adirondack lodges and fishing and hunting clubs.

There was a woman down on a farm in Tennessee who wrote an article on pig killing, and sent it to a New York editor. It was a subject she knew all about, and she set it forth with so much wit, vivacity and learning that the editor wrote to her, and she is now doing good work with her pen in this city.

Only a short time ago a young girl went to New York with a letter from her pastor to the Young Woman's Christian Association, where she was able to find lodgings. The next day, in a large plaid niter, she presented herself at one of the largest publishing houses in town, and announced that she had brought three stories to sell. It was the first writing she had ever done, and she thought she would just bring it to New York herself. When she left the office she carried away a check for seventy-five dollars. The three stories were taken on the spot. The girl was pretty, but the various editors declared that her beauty had nothing to do with the case.

These are sufficient instances to show that a woman with a new idea of value, no matter how obscure the place in which she lives, can make the value of her idea felt in the place where it will receive the most substantial reward.

It is not necessary to follow the example of the young woman who writes stories and brings them herself. On the contrary, it is more prudent to trust first to the mails and other common carriers. But the point is this: The usual callings of women are so crowded that the survival of the fittest in all the large cities is of practical and speedy operation. But for new ideas there was never, since the days of the Athenians of old, so large or so profitable a demand. It doesn't seem to make much difference in what direction such ideas tend. There is always somebody waiting and ready to pay the price.—*Cincinnati Commercial-Gazette.*

CONCERNING WOMEN.

Miss Harriet Monroe, the Chicago lady chosen to write the poem for the world's fair, furnished the ode for the opening of the auditorium a few years ago.

Mrs. French-Sheldon is completing her work on her African book. It will be published simultaneously in England and this country this month.

Miss Pool, the author of "Roweny in Boston" and "Mrs. Keats Bradford," serial stories in the New York Tribune, has received the high compliment of a request from a London publisher for permission to translate her "Daily" into German.

Two ladies of Chicago, the Misses Searles and Gorton, have entered the trade as book publishers.

Another convert to nineteenth-century Buddhism is Amabel Grey, the English novelist, whose latest novel, "Jerome," many of the critics pronounce to be the "best novel of the day."

Miss Scidmore, author of "Jinrikisha Dayd," commenced her literary career as Washington correspondent for the St. Louis Globe-Democrat, under the pen name of "Rhama." She is a native of Wisconsin, has written two books, been an extensive traveler, and went to Alaska on the first steamer that carried passengers.

Esther White Harrison is the ten-year-old authoress of a booklet entitled "Skye, the History of a Dog." The work was conceived, chaptered and written without adult suggestion.

Mrs. Zerelda Wallace has retired from the lecture field at the earnest solicitation of her children.

Twenty-two newspapers in Kansas are edited by women.

CONCERNING THE WORLD'S FAIR.

Mrs. H. K. Ingram, of Florida, is arranging to exhibit at the world's fair the following ingenious contrivance, which will surely be of great convenience to the traveling public. It is an arrangement by which one who cannot afford the luxuries of a Pullman car can enjoy a night's rest in one of the ordinary passenger coaches. A panel or door is built in the sides of the car between each two seats. This is unlocked and pulled down at night, and fits in the space between the two seats, giving the traveler a place to lie down. In the morning it is shut up again and completely hidden from view. The model has been seen by a great many of the leading railroad men, who look upon it with much favor. Mrs. Ingram has secured a patent on her invention.

A curious feature of the preparation for the world's fair is a set of lectures to be delivered by Mrs. Mary S. Lockwood, one of the national committee, to illustrate the work of women in all parts of the world. The profits of these lectures are to be used to defray the expenses of young women from each state to attend the world's fair who would otherwise be unable to go to Chicago. These women are to be women workers and women who have exhibits, and the young woman to be sent from Washington from the funds is Miss Jenny Stephens, whose artistic merit is well known here, and whose tapestry work is especially beautiful. Mrs. Lockwood's lectures are accompanied by stereoscopic views, and are to be given in the largest cities of the Union. I talked with Mrs. Lockwood last night about the fair. She said:

"Our idea is not to set up the work of woman in opposition to that of man, as many people think. We want our exhibits to be united with that of the men. Harriet Hosmer, for instance, does not go to the world's fair to compete with other women, but with the world at large, irrespective of sex. We want our women to take their places in the ranks of aspirants, irrespective of sex, and we think she will be able to hold her own. We are going to send a woman from the District of Columbia to do much of the painting on the walls of the exposition buildings, and the designs will be the result of competition. The work of the manager is getting on very nicely, and the committees in the various states are working with us. We shall not hold another meeting before April, but the work is going on, and the American woman, as shown at Chicago in 1893, will be a type of which the United States may be proud."

Splendid Investment

Do you want to join a new enterprise with many Millions of Dollars worth of Raw Material as its foundation (the Raw Material referred to is better than coal or iron for the foundation of large and profitable Manufactories). The first investors get in on the

GROUND FLOOR

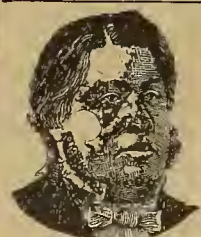
and secure stock at 12½ cents on the dollar, which is almost sure to increase to par in a short time and thus enable the first investors to make

700 PER CENT Profit

in a few months, and much more by holding stock longer.

This is a chance seldom offered—the one opportunity in a lifetime. One Hundred Dollars invested now will make you a profit of Seven Hundred Dollars soon. One Thousand Dollars invested now ought to make you a profit of Seven Thousand in less than a year. Don't miss this chance if you want a good thing, but write at once for full particulars to

N. S. PERRY,
Springfield, Ohio.



THE ONLY GENUINE
LIFE AND WORKS

Charles Haddon
SPURGEON

By Henry Davenport Northrop, D.D.

The Greatest Preacher of Modern Times. HIS LIFE AND DEATH. Three Books in One. OVER 600 PAGES! HANDSOMELY ILLUSTRATED! Bound in Fine Silk Cloth, Marbled Edges, \$1.50. Bound in Full Morocco, Gilt Edges, \$2.00. Every Christian family wants the book. You can sell it in every home. Send 15 cents in stamps for a 75-cent outfit, and start now while the interest is at fever heat, or send us \$1.25 and we will send a copy of the book in FULL MOROCCO, together with outfit free, prepaying charges. One agent sold 20 copies the first day, without the prospectus. We also have other fast-selling books, and THE BEST LINE OF FAMILY BIBLES PUBLISHED. Most liberal terms ever given agents. Address

MAST, CROWELL & KIRKPATRICK,
Publishers, Springfield, Ohio.

AN EASY WAY OF WASHING CLOTHES.

A Trial
Package
Free

Frank Siddall's Soap

A Trial
Package
Free

It is GUARANTEED to cut down the labor on wash-day so that a delicate woman or young girl can do a large wash without being tired; and makes the clothes clean, sweet and white without boiling or scalding, and WITHOUT INJURY to the most delicate fabric.

THE FUEL SAVED ON WASH-DAY PAYS FOR THE SOAP

It Does
Away With
The
Wash-boiler
Nuisance.

THESE ARE THE DIRECTIONS:

First—Put the clothes in a tub of warm water, rub the soap on them one by one and let them lie in the water for at least 20 minutes.

Second—After they have soaked the 20 minutes, rub out on the wash-board in the usual manner and the dirt will be found to actually drop out with less than half the usual rubbing.

Third—Rub them lightly on the wash-board through a clean rinse water—this will take out the dirty suds. (No other rinsing to be done.)

Fourth—Then put them through a Blue water and hang up to dry without Boiling or Scalding a Single Article, no matter how soiled some of them may have been.

Hurrah! kick away the Wash Boiler!
No Boiling with Frank Siddalls Soap!



**LADIES, TELL YOUR FRIENDS—
CHILDREN, COAX YOUR MOTHERS—
HUSBANDS, URGE YOUR WIVES—**

To let the wash-boiler stay in the closet next wash-day and give one fair, honest trial to the Frank Siddall's way of washing clothes—after one fair trial a house-keeper will never go back to the old, hard, slavish way.

TRIAL PACKAGE FREE

Make the following promises and a trial package will be delivered to you by mail absolutely free. The promises must be plainly made or the soap will not be sent.

Write a postal card like this, filling in the blanks with your name and post-office address, and also your neighbor's name.

I promise to use Frank Siddall's soap, if sent free, on the whole of my family wash, EXACTLY BY THE DIRECTIONS, the first wash-day after I receive it.

Name.....

Post-Office.....

County.....

State.....

My neighbor, Mrs..... has promised that she will come and see the washing done.

Just think! Clothes washed clean, sweet and white in LUKEWARM WATER and hung out to dry WITHOUT BOILING or SCALDING a single piece! Heat the washwater in a TEA-KETTLE and follow every little direction. Tell all your neighbors and friends to send to us for it. It will cost them nothing provided they make the promises.

In order that our subscribers may know that this offer is genuine, and because we want the women to learn this easy way of washing, we have agreed that the postals may be sent to us, and we will see that the soap is sent just as promised, and hope that many thousands of our subscribers will avail themselves of this generous offer at once.

Write your postal card as above and address it to

Publishers **FARM AND FIRESIDE**, Springfield, Ohio.

Our Household.

NOTHIN' TO SAY.

Nothin' to say, my daughter! Nothin' at all to say—
Gyrls that's in love, I've noticed, ginerly has their way—
Yer mother did, afore you, when her folks objected to me—
Yit here I am, and here you air; and yer mother—where is she?

You look lots like yer mother—purty much same in size;
And about the same complected, and favor about the eyes.
Like her, too, about livin' here—because she couldn't stay;
It'll 'most seem like you was dead—like her—but I hain't got nothin' to say!

She left you her little Bible—writ her name across the page—
And left her ear-bobs fer you ef ever you come of age.
I've allus kep' 'em and gyarded 'em, but ef yer goin' away—
Nothin' to say, my daughter! Nothin' at all to say!

You don't rikollect her, I reckon? No, you wasn't a year old then!
And now yer—how old air you? W'y, child, not "twenty!" When?
And yer next birthday's in 'prile, and you want to get married that day?
* * * I wisht yer mother was livin'—but—I hain't got nothin' to say!

Twenty year! and as good a gyrl as parent ever found:
There's a straw ketchd onto yer dress there—I'll bresh it off—turn 'round.
(Her mother was jes' twenty when us two run away!)
Nothin' to say, my daughter! Nothin' at all to say!

—James Whitcomb Riley.

HOME TOPICS.

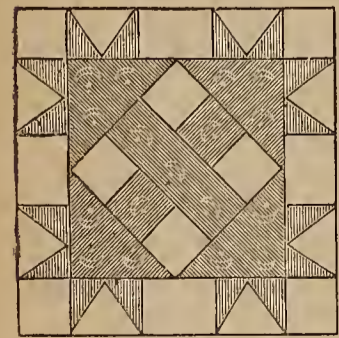
HOT WEATHER HINTS.—The hottest part of the summer is now upon us, and we must try to make it as tolerable as possible. The house is coolest when kept closed as much as possible during the hottest part of the day, and only thrown open during the night and early morning.

Flies are more troublesome now than earlier in the season, and it is not safe to leave meat, either cooked or uncooked, uncovered for a minute. Although one has screens at all doors and windows, yet the wily fly will slip in; but if the room is darkened, except one aperture, nearly every fly may be driven out by taking a newspaper in each hand and shaking them vigorously about the room. Be careful that everything about the premises is kept as clean as possible and nothing left exposed that will attract flies.

Cooling effects should be sought in food. Meat should be eaten sparingly, and eggs, fish, salads, fresh fruit and vegetables compose the greater part of the meals. Once a day is often enough to eat meat. The old idea that fruit and vegetables were not healthful has long since been proven a mistake. Only be sure that vegetables are fresh and fruit ripe and fresh, and there is no danger. Physicians say that bowel trouble is often caused by eating too freely of meat in hot weather. There is no doubt that the American people eat too much meat at all seasons of the year, and surely, during the hot summer the body needs cooling diet more than heat-producing animal food.

IN THE NURSERY.—Hot weather brings no relaxation of care to the mother of

little children. To keep the baby comfortably clothed and yet protected from sudden changes of temperature is more difficult in summer than in winter. Light



CORNER STAR.

flannel should be kept over the bowels both summer and winter. A knit or crocheted band, with shoulder-straps made of wide, soft tape, is about the best. A high-necked gauze shirt with sleeves that reach to the elbows, a flannel skirt, soft, unstarched cambric slip and knit socks complete the baby's hot weather toilet. If a sudden change to cooler weather comes,

or a sudden cold wind blows up, as it sometimes does, put a little wool wrapper on over baby's dress and keep him out of a draft. Remove the little socks if they get damp, and be sure that the little feet are always warm and dry.

Baby's napkins require especial care in hot weather. They should be rinsed out in clear water after each wearing and dried in the open air. They need not be ironed each time. If baby chafes very easily, linen is the best napkin to use next the skin. Old table-cloths make good little ones to lay inside the larger ones of cotton diaper.

Use Cuticura soap to wash the baby, and the best powder I have tried is called Comfort Nursery Powder. Lanoline is also good to cure chafing.

The clothing should all be changed at night, and a light wool, or cotton and wool, nightgown substituted for the day clothing. It is a good plan to make this gown long and full and have a draw-string in the bottom, so that it can be drawn up to prevent the child becoming uncovered during the night.

In very warm weather baby will sleep better if sponged off with tepid water when undressed for the night. Never use a rubber over the diaper at night, as it is both uncomfortable and unwholesome. Keep baby out of doors, but avoid the noonday heats.

If you have a shady porch or convenient trees, a hammock will make a nice place for his nap, but be sure that he is shielded

White chamois gloves are the best warm weather gloves there are, as they can be easily cleaned by washing them in gasoline, and when dry, rub well with powdered magnesia, inside and out, to soften them.

A white felt hat, after being spotted and soiled badly, can be cleaned in the following manner: Get a block of magnesia at the druggist's, for five cents, and rub it over and over again on your hat, using a clean clothes-brush to brush it; then put on more magnesia. Clean out of doors, as the magnesia-powder will get into your carpet. Of course, remove the trimming first.

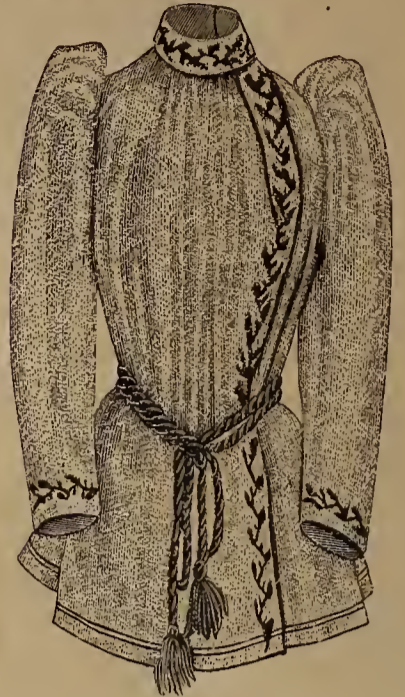
A pretty white surah dress I saw was made with two tiny ruffles around the skirt, headed with silver tinsel ribbon; the cuffs and sash were of moss-green silk. A deep ruffle finished the yoke, and the sleeves were bishop sleeves. These are very popular with thin dresses. With the Italian sleeve, a lining of some kind is necessary to keep them puffed.

A bride's dress of pale gray Bedford cord was made in the severe princess style, with a vest of white mull and mull sleeves in four puffs. It was very elegant-looking, and could be utilized for a dress the sleeves of which were out of style or badly worn.

The best use for an old-fashioned silk dress is to convert into a petticoat. Some ladies simulate a silk petticoat by adding a flounce pinked out on both edges and sewn to the inside of the dress skirt.

would only be becoming to a slender person with a long neck.

The Russian blouse grows in favor, but it is not so pretty in very thin material. This one is of Turkish toweling, to wear



RUSSIAN BLOUSE.

indoors, as this material has body enough to dispense with a lining. The briar-stitch trimming is of heavy Bargarene linen thread in pale pink. The cord and tassel can be made at home, also, of coarse Dexter cotton, with a few threads of the pink in it. I can send any one a pattern for 30 cents, if I have the bust measure, and they come with two sleeve patterns and a fitted waist lining pattern, also.

I can send a beautiful bell skirt pattern, also, for 15 cents.

Many beautiful novelties will be placed upon the market now, marked very much below the original price, so that one can purchase for next summer, if they can decide upon what they want.

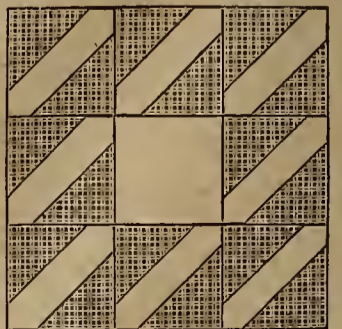
LOUISE LONG CHRISTIE.

ITALIAN CORN-CAKES.

An intelligent woman, when she has the advantage of travel, is expected to bring home new ideas. We are accustomed to hear of the ruins and cathedrals of Europe, the paintings in Antwerp, Venice and Madrid, the statues in Florence and the architecture in Rome. It is strange that few women seek to know the domestic habits of the people. They seem lost in the contemplation of the great, and overlook small, every-day matters which, from this fact, have a novelty which cannot fail to interest us. For this reason I was glad when a traveled friend gave me the following information concerning Italian food. To my surprise, I found that corn-cakes are a favorite edible. But let me give my friend's exact words. I quote from a letter:

"Indian corn-meal is one of the staple articles of diet in Italy, where it is known under the name of *Polenta*. All through Lombardy the railway runs between small fields of maize, *Il Gran' Turco*, as the natives call it, under the mistaken notion that it is a native of the Orient. In spite of its title, the 'Big Turk' looks dwarfed and stunted enough in comparison with those straight, tall stalks so familiar to us. No doubt it is homesick for the hot sun and the fierce rains of its native western world.

"Italy does not pretend to raise enough Indian corn for home consumption, and it is one of our chief exports to the land of marbles and mosaics. Their old-fashioned methods of curing and grinding, however, make a meal much sweeter than our kiln-dried and patent-process product. They have several ways of using and preparing it, which seem unique to the American traveler. Small birds, roasted or broiled, are often served on a bed of corn-meal mush. It is an excellent combination. Try it. Below are two recipes for the Italian corn-cakes, called *Gnocchi* (pronounced



PORTER BLOCK.



FIG. 2.

SUMMER DRESSES.

FIG. 3.

from both sun and drafts. Watch the little ones carefully and try experiments cautiously. It is better to err on the side of overcarefulness. MAIDA McL.

SUMMER DRESSES.

It is difficult to decide upon the summer dresses until the season is upon one. Such beautiful designs in all thin materials appear with the season, one is always sorry if purchases are made before. There is always, too, a time in July when great reductions are made, and then is a good time to buy. It doesn't take long to construct a pretty thin dress, and one always feels more in the humor when the season is here.

Our model, Fig. 1, can be very successfully worked up in any of the diaphanous materials, the surplus neck filled in with crepe de Chine or tulle. The bead finish around the neck can be of jet or pearl beads, according to the material used. A garnet cashmere or challis is a pleasant dress for cool evenings. Made with elbow sleeves, a vest of white embroidery, a garnet straw hat trimmed with pale blue feathers, and white chamois gloves worn with it, makes a very effective toilet for a young lady.

One color throughout the costume is being observed more than ever, even in dressing children. No color of the season is so popular as navy blue, or all white.

Beautiful suits are being made of marseilles or pique, in skirt, vest and jacket. The material is shrunk first, so that it can be safely laundered afterwards.

Shirt-waists of pale pink and blue ginghams are worn with dark skirts.

Lace trims everything. Arranged over silk, it trims challies and other wools. The laces of the present day are brought in such perfection in cheap grades that the real laces of our grandmothers' time have become a fable. Those possessing it treasure it with their diamonds and silver.

In our illustration, Fig. 2, the dress is of cream-white Henrietta, suitable for a fleshy young lady, being entirely close-fitting. The trimming around the girdle, neck and sleeves is made of loops of baby ribbon placed closely so as to form a ruche. This can be of any color.

Fig. 3 is of thin material, the sleeve to the elbow being of watered silk; also the sash and shoulder-bows. The fullness of the waist is brought up and shirred at the neck, forming a standing ruffle. This

Ny-o-ki), which will be found to give a pleasant variety to the noon lunch-table.

"Prepare a mush of one pint of corn-meal, two tablespoonfuls of flour, one pint each of milk and water, one teaspoonful of salt. Sprinkle the meal and flour gradually into the boiling liquid; let the mush cook slowly two hours. Pour into a shallow pan to cool. The mixture should not be more than half an inch deep. When cold, cut into small, round cakes, arrange in a square baking-dish in overlapping rows, pour a little melted butter over them, add a liberal sprinkling of grated cheese, and brown quickly in the oven; serve hot.

"GNOCCHI A LA CREME.—Arrange the cakes of cold mush in layers, with grated cheese between each layer, cover with cream sauce, and bake one half hour.

CREAM SAUCE.—To two tablespoonfuls of butter melted in a saucepan add one tablespoonful of flour, a pinch of salt, and stir carefully, so that it does not burn. Add one half a pint of milk and allow it to boil up once. Pour over the *Gnocchi* before placing them in the oven.

KATE KAUFFMAN.

DON'T.

Don't give the wee ones all the candy they desire, through a mistaken idea of kindness. Poisonous materials are used in the composition of all confections.

Gamboge, a powerful poison, is used for coloring them yellow; Brunswick green, emerald green or the arsenite of copper are used for coloring green; Prussian blue, smalts and ultramarine are used for the different shades of blue; red lead for the red, and burnt umber, an earth containing oxide of iron, forms the coloring matter of the supposed innocent brown candies; while "daff," chalk, marble, plaster of Paris and white clay are extensively employed in the adulteration of the sugar of which all candies are made.

In view of all these facts, it is no wonder that the constant use of such poisons produce derangements and disease, particularly of the stomach and alimentary canal. Hence my text: Don't allow the children to eat much candy.

ELLA BARTLETT SIMMONS.

TO WASH BLACK EMBROIDERED LAWNS.

One quart of wheat bran tied loosely in a cheese-cloth bag, put into a tub, and pour on sufficient water to wash the dress. The water is best boiling. Let it cool until the hands can be borne in it without discomfort, squeeze the bag until the water is starchy; then remove to another vessel and pour on more boiling water, sufficient to rinse the dress. Wash the dress thoroughly in the first water. Do not use soap; the bran will clean it.

Now have ready a package of slate-colored Diamond dye, dissolved in a pint of boiling water, as for making ink, and when you have squeezed the bran bag nearly dry, add half a cupful of the dye to the rinse-water, and stir; then rinse the dress in it and hang it out to dry, wrong side out, in the shade. When dry, sprinkle very evenly, and roll up for two hours. Iron on the wrong side over a black cloth, with hot irons.

Have some tartaric acid dissolved, and with a tiny bit of cotton fastened on a wooden toothpick, remove the stain from under the edges of the finger-nails, and rinse the hands with the acid, and the stain will easily come off.

Lawns with white ground and colors that will not bear soap may be washed with the yolks of an egg, beaten into lukewarm water. And if you want the dress to look like new, clap it between the hands until dry. If there is a little wind, this is not a tedious operation.

HELPER.

BABY'S SKIRT PROTECTOR.

To prevent baby from soiling his clothes, a half-moon shaped pad, 13 by 16 inches, doubled and stitched around the waist, is very good indeed. To secure it in place, it is tied with tapes loosely in front over

the napkin. If to this pad a white rubber cloth of the same shape be buttoned, the protection is complete. One dozen pads and four or five rubbers will be all that are needed.

Cleanse the pads with ammonia-water. A little pulverized borax dissolved in the water in which they are washed is also good to prevent any unpleasant odor.

ELLA BARTLETT SIMMONS.

A USEFUL INVENTION.

A bricklayer of Chicago has invented a garbage-box, the general adoption of which would do away with one of the most unsightly and offensive nuisances that disfigure the streets of our cities. The invention is a round, galvanized-iron receptacle to be placed underground and covered with a movable iron lid. When raised into the garbage-cart by means of a small, portable crane attached to the cart, the bottom drops and empties the contents, when the box can be quickly and easily replaced in its unseen receptacle.

A NEW NURSING-BOTTLE.

One of the best nursing-bottles in the market was patented just one year ago, under the name of "Health" nursing-bottle.

It is constructed in two sections, entirely of glass. The parts are fastened together with a nickel-plated clasp, which is attached to the outside of the upper part. When it is desired to separate the parts for cleansing, the metal arms are turned to one side, free from the glass projections of the lower section. The parts are fastened together again by laying the rubber band in its place on the lower section and turning the pivoted arms until they catch at the glass projections, where they will securely lock themselves.

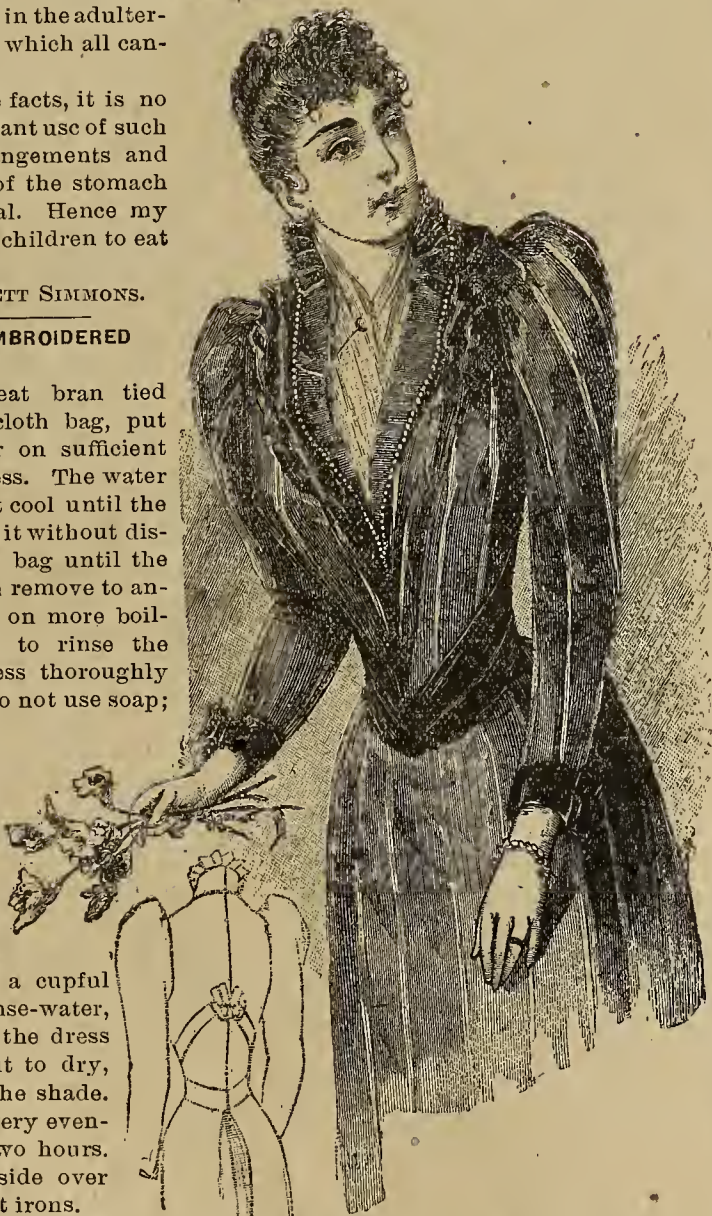


FIG. 1.—INDOOR TOILET WITH SHORT BODICE.

This bottle can probably be found in all the larger cities, and for the summer especially deserves the name of "Health" nursing-bottle.

ELLA BARTLETT SIMMONS.

PIE-PLANT PUDDING.

1 cupful of sweet milk,
½ cupful of sweet cream,
½ teaspoonful of salt,
1 teaspoonful of soda,
2 teaspoonfuls of cream of tartar,
Enough flour to make a stiff batter.

In a buttered basin put a thin layer of dough and a generous one of sliced rhubarb, or pie-plant, with sugar and a little salt; then another of dough and another of pie-plant and sugar, with a little salt. Cover with a layer of dough, and bake;

it will usually cook in one half hour with a good fire. Serve the pudding warm with a sauce of cream and sugar, or butter and sugar beaten to a cream. GYPSY.

BEVERAGES.

LEMONADE.—This is invaluable in fevers and also in rheumatic affections. Rub two medium-sized lemons soft; cut them through the center and squeeze out the juice; take out the seeds; put two tablespoonfuls of white sugar to each lemon, and a pint of cold or boiling water, according as you desire the lemonade—hot or cold.

AUNT ELLEN'S SODA-WATER.—

3 pounds of sugar,
1½ pints of molasses,
¼ of a pound of tartaric acid,
½ ounce of sassafras,
2 quarts of boiling water.

After these have boiled together, bottle and cork well. It will keep a long time in a cool, dark place. Use two tablespoonfuls of this syrup and half a teaspoonful of soda to a glass of water.

SODA CREAM.—Dissolve one pound of lemon sugar in a pint of water, let it boil; add the whites of three eggs beaten to a stiff froth, boil four minutes, stir and strain; when cold, add four teaspoonfuls of lemon extract and bottle. When wanted for use, put four tablespoonfuls into a glass of ice-water, add to it one third of a spoonful of soda, stir and drink.

STRAWBERRY ACID.—Four ounces of tartaric acid dissolved in two quarts of water, and pour it over two gallons of ripe strawberries; let stand twenty-four hours and drain the liquor off; to every pint of juice add a pound and a half of loaf sugar; boil, let stand three days and bottle. A few spoonfuls in a glass of ice-water makes a delightful drink.

RASPBERRY VINEGAR.—Put ripe raspberries in a stone jar, cover with cider vinegar, let stand twenty-four hours; pour the liquor over a gallon of fresh berries, and let stand over night; allow one pound of loaf sugar to one pint of juice; boil and skin; bottle. Add half a glass of the vinegar to one of ice-water.

COWSLIP MEAD.—

1½ pints of sugar,
½ pint of molasses,
2 ounces of tartaric acid,
1 ounce essence of sassafras.

Into the sugar and molasses pour three pints of boiling water and let it stand until lukewarm; then add the tartaric acid and sassafras. Bottle when cold. When required for a drink, put a tablespoonful of the mixture into a tumbler, fill two thirds full of cold water, add a very little soda and drink while foaming.

L. L. C.

CURRENT, RASPBERRY WHISK.—Add ten ounces of crushed sugar to three gills of the juice of the fruit, and the juice of one lemon. When thoroughly dissolved, add one and one half pints of cream; whisk until quite thick and serve in small glasses.

PRESERVES AND JELLIES.

PINEAPPLE PRESERVES.—Pare and slice the apples; then weigh them, and to every pound of fruit use a pound of sugar; put a layer of the slices in a jar and cover them with a layer of sugar, and thus proceed until the apples and sugar are used up; let them stand over night; then take the apples out of the syrup, cook the syrup till it thickens, replace the apples and boil fifteen minutes; take the apples out of the syrup and let them cool; then put them in jars and pour the syrup over them. A few pieces of ginger-root boiled in the syrup will improve it.

SPICED CHERRIES.—

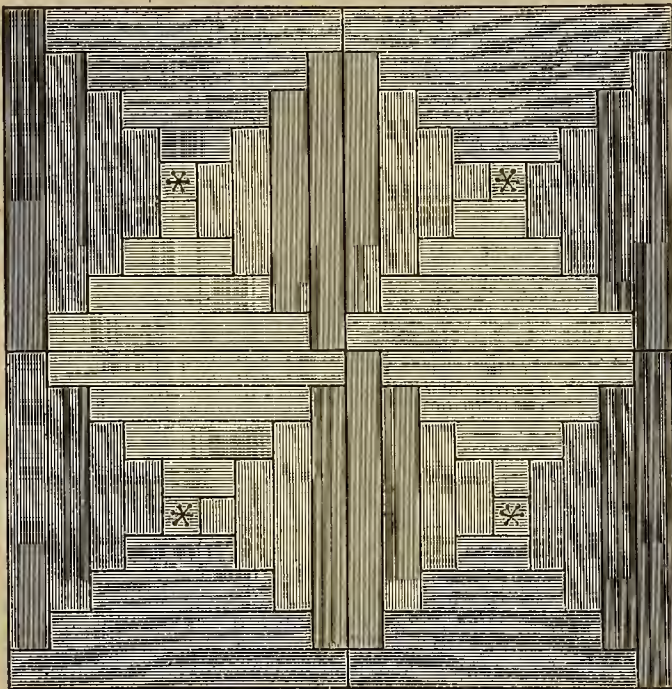
9 pounds of fruit,
4 pounds of sugar,
1 pint of cider vinegar,
½ ounce of cinnamon bark,
½ ounce of whole cloves.

Let the syrup come to a boil before putting in the fruit; cook the fruit until the skins break; then take out the fruit and

boil the syrup down until thick; pour over the fruit hot.

SPICED TOMATOES.—Take red and yellow pear-shaped tomatoes; prick two or three times with a fork, sprinkle with salt, let stand over night, pack in a glass jar and cover over with vinegar, prepared as follows for a half-gallon jar:

1 pint of vinegar,
1 teaspoonful of cloves,
1 teaspoonful of cinnamon,
1 teaspoonful of allspice,
1 teaspoonful of pepper,
1 tablespoonful of sugar.



LOG CABIN.

The spices should be ground. Let this come to a boil and pour it over the tomatoes; after they get cold tie strong paper over them.

ORANGE MARMALADE.—There is a piquant taste to this article that is very agreeable. It should be put away in small jars, covered first with a paper soaked in whisky, tying over this a paper dipped in the white of an egg. Quarter twelve oranges, remove the seeds and pith, slice thinly, put over them six quarts of cold water and let stand till the next day; then put all into a preserving-pan and boil rapidly for two hours. It must then measure eight pints; if not, add hot water to make the quantity; then add eight pounds of loaf sugar and the thinly-pared rinds of four lemons tied up in a muslin bag, and boil for an hour longer; add the strained juice of the lemons twenty minutes before removing from the fire.

L. L. C.

SOUR YEAST.

Salt-rising yeast will sometimes sour under the best of care. It will look light, but refuse to raise more than half an inch or so, and the air bubbles all look the same size, and there is a peculiar acid smell to the yeast. This will never make nice bread, if you do try to make soda counteract the acid; better use it for pancakes made by using

1 egg,
½ cupful of sour cream or buttermilk,
1 teaspoonful of soda,
½ teaspoonful of salt,
1 cupful of the yeast,

And as much more flour as may be necessary. You can multiply the quantities as much as you desire to make a needful amount of batter, but keep the proportions the same.

Sour yeast can be used for Graham bread by using

1 egg,
½ cupful of New Orleans molasses,
½ cupful of sour cream,
2 cupfuls of sour yeast,
1 teaspoonful of salt,
2 small teaspoonfuls of soda.

Use enough Graham flour to make the batter as stiff as can be stirred with a spoon. Put in a buttered dish and bake one hour, or steam over a kettle of water for two hours. Some people do not like the crust to Graham bread, and to them steaming the loaf would be best, as there is no hard crust then and the bread is very moist. Others like the crust best, and would probably like the baked loaf much better.

GYPSY.

Send for free trial package of soap as offered on page 7. You need not heat up your house by boiling the clothes, and the fuel saved pays for the soap. The trial package is sent free.

Our Sunday Afternoon.

TIME'S EVENING HOURS.

We know by many a token
Evening creeps along the sky;
And the words by Jesus spoken
Tell the midnight hour is nigh;
The early hours seem going fast,
But midnight hour will be the last.

There will be no more delaying;
What a blessed thing to know!
For his coming I am praying—
To the marriage I must go;
But if the early hours go past
Shall I have oil enough to last?

Ah, I have thought this over,
And what folly it would be,
When the blessed Bridegroom-lover
Shall come down for you and me,
To have the waiting hours gone past
And not have oil enough to last.

So my lamp shall be kept ready,
And, with other oil beside,
I will watch till midnight, steady,
Jesus' coming for his bride;
Then I will rise and follow fast,
With light and oil enough to last.

I must watch and wait till midnight,
Though the hour I may not know;
But by many a feeble, flick'ring light,
That will fainter, fainter grow;
And, as the darkness deepens fast,
Have oil to trim my lamp to last.

—J. Albert Libby.

FATHERS AND DAUGHTERS.

If fathers would only realize how much the rounding out of both the character and education of their daughters depended on the relation they held to their fathers, the complaint of the narrowness of view and personal relations which women hold to affairs would disappear. Women who grow up entirely under a mother's influence naturally view life from the feminine standpoint, having minds more fitted to comprehend details than to grasp entire situations.

The very nature of a training entirely under feminine influence is to bound the mental vision by the horizon of home fences, domestic, social, church and inherited opinions. Of the vast world outside these walls a girl can only learn as she is brought in contact with it through the medium of an intelligent father or brother, unless circumstances force her to battle with the same outside world in the bread-and-butter struggle. More women make wrecks of their lives because of the mistaken training that prevented a knowledge of financial and economic conditions than from any other cause.—*Domestic Monthly*.

THE LITTLE THINGS.

How many of us, when we awake in the morning, resolve to do all the good we can, and going out, coming in contact with the world, forget to be pleasant, forget the smile, kind word and act, wanting to do some great act? Leaving the little things undone, the pleasant good-morning, the grasp of the hand, the thousand and one little things that seem so insignificant to us; yet to some one unaccustomed to kindnesses, how much it is to them no one but the heavenly father knows.

Not a sparrow falls to the ground without our heavenly father's notice; and remembering this, let each one of us do all the good we can if we cannot receive the applause of men because we fail to do some great act. Let us receive the "Well done, good and faithful servant; thou hast been faithful over few things, I will make thee ruler over many," and be more than content.—*Christian Standard*.

WHAT THE WOMAN'S EXCHANGE HAS DONE.

But while the exchange is open to serious criticism from a business point of view, it has accomplished much, and has in it still greater possibilities. It has set a high standard for work, and insisted that this standard shall be reached by every consignor, not only once or generally, but invariably. It has maintained this standard in the face of hostile criticism and the feeling that a charitable organization ought to accept poor work if those presenting it are in need of money. It has shown that success in work cannot be attained by a simple desire for it or need of it pecuniarily. It has taught that accuracy, scientific knowledge, artistic training, habits of observation, good judgment, courage and perseverance are better staffs in reaching success than reliance upon haphazard methods and the

compliments of flattering friends. It has raised the standard of decorative and artistic needlework by incorporating into its rules a refusal to accept calico patchwork, wax, leather, hair, feather, rice, spatter, splinter and cardboard work. It has taught many women that a model recipe for cake is not "a few eggs, a little milk, a lump of butter, a pinch of salt, sweetening to taste, flour enough to thicken; give a good beating and bake according to judgment." More than all this, it has pointed out to women a means of support that can be carried on within their own homes, and is perfectly compatible with other work necessarily performed there. It has in effect opened up a new occupation to women, in that it has taught them that their accomplishments may become of pecuniary value, and a talent for the more prosaic domestic duties turned into a fine art and made remunerative.

A CLERICAL DREAM.

The pastor dreamed that his church was a stage-coach at the foot of a hill, up which, in the absence of horse-power, it fell to his lot to drag it.

Some of his officers and members bade him be of good cheer, for they would all help. He should guide the tongue, some of them would turn the wheels, others push, and so, together, they should get it up the hill.

For a while the heavy coach moved slowly but surely up. After a time, however, its weight seemed to increase, till the pastor, bringing the vehicle to a stand on the first ridge and turning the tongue to prevent it slipping down, ran to see what was the matter. All the helpers, tired of turning wheels and pushing, had jumped into the coach and were sitting inside!

The pastor cannot drag the coach up all alone. If all will take hold, the heaviest coach will move up the toughest hill.

Pastors have been encouraged to attempt great things, and then left when half way up the hill.—*The Episcopal Recorder*.

SIGNS IN THE SUN, ETC.

The sun is now entering upon another period of great disturbance. An enormous solar spot, covering one sixteenth of the surface of the sun, appeared last week upon the face of our great luminary, and after two or three days suddenly broke up into about thirty spots. Simultaneous with this, there was much magnetic disturbance on the earth, great storms sweeping Europe and Africa, and almost unequalled displays of the aurora appearing in the sky.

We have entered upon a year of momentous significance, and every day now is freighted with meaning. He is a foolish Christian indeed who is investing any interest on earth beyond the present century.

Beloved, do not put your money or your life into something that is going to come back to you on the other side of 1900, but go to work soon, and let everything be aimed for immediate returns. Make the most of your life, your means, your opportunities, before the decade shall end. Time may last longer—God only knows; but much, oh, how much is to happen before this decade shall have closed! Wrapped up in its bosom lies the significance of centuries. It is a great thing to live to-day. Oh, let us live.—*Christian Alliance*.

THE GROWTH OF CHRISTIANITY.

If we sum up the encouragements to hope, founded on the success of Christian work, the figures are as follows:

Three centuries after Christ there were 5,000,000 Christians.

Eight centuries after Christ there were 30,000,000 Christians.

Ten centuries after Christ there were 50,000,000 Christians.

Fifteen centuries after Christ there were 100,000,000 Christians.

Eighteen centuries after Christ there were 174,000,000 Christians.

Now there are 450,000,000.

The followers of the three religions—Confucianism, Buddhism and Taoism, all combined, are less in number than the Christians alone.

Including the latest division of Africa among the European powers, about four fifths of the land of the world is under Christian control.—*U. S. Army Chaplain*.

Don't get a new wash-boiler; don't even get the old boiler mended, but next wash-day, try the easy way of washing clothes with Frank Siddall's soap. See our offer of a free trial package on page 7.

Brandreth's Pills

Brandreth's Pills are the great blood purifier. They are a purgative and blood tonic, they act equally on the bowels, the kidneys, and the skin, thus cleansing the system by the natural outlet of the body—they may be called the purgative sudorific and diuretic medicine. They stimulate the blood so as to enable nature to throw off all morbid humors, and cure disease no matter by what name it may be called. One or two of them taken every night will prove an infallible remedy.

Brandreth's Pills are purely vegetable, absolutely harmless, and safe to take at any time.

Sold in every drug and medicine store, either plain or sugar coated.

PETROLEUM VASELINE JELLY.

—AN INVALUABLE FAMILY REMEDY FOR—

Burns, Wounds, Sprains, Rheumatism, Skin Diseases, Hemorrhoids, Sun Burns, Chilblains, Etc. Taken Internally, Will Cure Croup, Coughs, Colds, Sore Throat, Etc.

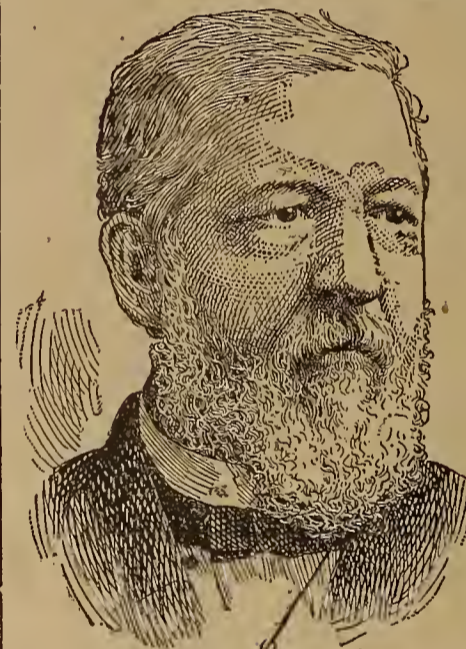
PURE VASELINE (2-oz. bottle).....	10 cts.	VASELINE SOAP, Unscented.....	10 cts.
POMADE VASELINE (2-oz. bottle).....	15 "	VASELINE SOAP, Perfumed.....	25 "
VASELINE COLD CREAM.....	15 "	WHITE VASELINE (2-oz. bottle).....	25 "
VASELINE CAMPHOR ICE.....	10 "	CAMPHORATED VASELINE (2-oz. bottle).....	25 "
		CARBOLATED VASELINE (2-oz. bottle).....	25 "

FOR SALE EVERYWHERE AT ABOVE PRICES.

Be careful to accept only the genuine, put up and labeled by us, if you wish to receive value for your money. If any dealer offers you an imitation or substitute, decline it. DO NOT BE CHEATED.

CHESEBROUGH MANUFACTURING COMPANY.

Mention this paper when you write.



AGENTS WANTED

FOR A GRAND NEW BOOK

BY

Hon. Jas. G. Blaine.

Four Complete Books in One Magnificent Volume of

NEARLY 900 LARGE QUARTO PAGES!

OVER 400 SPLENDID ENGRAVINGS!

Book 1.—"A Review of Our Country," by Hon. Jas. G. Blaine, Secretary of State.

Book 2.—"A New Life of Columbus," by J. W. Buel.

Book 3.—"A Complete History of America," by John Clark Ridpath, LL.D., the first historian of the century.

Book 4.—"A Complete History and Description of the World's Exposition at Chicago," by Hon. Benjamin Butterworth, Secretary and Solicitor-General of the World's Fair Association.

This Great Work is Now Ready.

Its sale during the next two years will be threefold greater than that of all other subscription books. Experienced agents will recognize it at first sight the best opportunity to make money that has been offered them in five years.

Send at once for descriptive circulars and terms; also information in regard to our

FREE TRIP TO THE WORLD'S FAIR.

Or, better still, send \$1 for agents' complete outfit and get started a week earlier, as every day saved will mean from \$5.00 to \$10.00 in pocket. Address

MAST, CROWELL & KIRKPATRICK, Springfield, Ohio.

CONSUMPTION

(except last stages), CATARRH, BRONCHITIS, ASTHMA, and all Diseases of the Lungs, surely cured by the New **Andral-Broca Discovery**. Not a Drug, but a New Scientific Method of Home Treatment. Cures Guaranteed. Sent FREE to all who apply. Try it FREE, and pay if satisfied. State age and disease in full. Address NEW MEDICAL ADVANCE, 62 E. 4th St., Cincinnati, O.

Kennedy's Medical Discovery

Takes hold in this order:

**Bowels,
Liver,
Kidneys,
Inside Skin,
Outside Skin,**

Driving everything before it that ought to be out.

You know whether you need it or not.

Sold by every druggist, and manufactured by **DONALD KENNEDY, ROXBURY, MASS.**

MENTION THIS PAPER WHEN ANSWERING ADVERTISEMENTS.



CAMPAIGN BUTTONS

Our new silk wove Campaign Button is the neatest thing out. Everybody wears it. Cut shows official Republican Button. Democratic same quality, different design.

AGENTS MAKE \$10.00 A DAY

by following up political gatherings. Why don't you try it! You can sell a few dozen around home. Order one for yourself anyway. State whether you want Democratic or Republican. Sample 10c. One doz. 75c. 100 for \$5.00. **J. BRIDE & CO., 122 Nassau St., New York**



DUEBER

SOLID SILVERINE.

Genuine Dueber, solid silverine watch, dust and damp proof; guaranteed for 20 years. Fitted complete with our very highest grade imported movement, magnificently jeweled and guaranteed to run and keep correct time for ten years.

It is a heavy 3 oz. full-gents size watch, and a beauty. Our former price was \$5.00, but for the next 30 days we offer them for \$2.98 each, and a handsome chain and charm free with each watch.

OUT THIS OUT, send it to us with your name, post office address and name of your nearest express office, and we will ship it there for your examination. If, after examination, you are convinced that it is a bargain pay the express agent \$2.98 and express charges, and it is yours. Otherwise you pay nothing and it will be returned at our expense. Address

THE NATIONAL M'FG & IMPORTING CO., 334 Dearborn St., CHICAGO, ILL.

Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

FEEDING FOWLS.

WELL-FED fowls are given their rations at stated periods, not once, but twice, and are never neglected. This is quite a point where eggs are required, or when the health of the fowl is taken into consideration. An overgorged fowl, during the cold weather, will most surely show symptoms of disease when warm weather sets in. Then commences a course of doctoring, which in almost every instance is in vain. For a steady feed, whole corn is not always suitable. Neither is an old, tumble-down building, full of cracks that admit drafts of air and drifts of snow, suitable for their confinement.

Where there are no combs to freeze, a free outside run is to be preferred. It is a direct draft on the bird at night that produces the roup and frosts the comb. When fowls have fasted for any length of

the Brown Leghorn. Merit alone is the recommendation of a breed. We have in this country about seventy-five breeds of poultry, yet the number in favor with the farmers may be counted on the ends of the fingers. When a really meritorious breed gets a firm hold on public favor it is not soon displaced. This is seen in the case of the Plymouth Rock, which is not the best breed for producing eggs, or for the market-stalls, yet it is well up to the average in those respects. The breed is hardy, as well as productive, and that merit of hardiness is an important, strong one. There are so many different climates that to introduce a breed which will prove superior in all sections is not easily accomplished, but farmers are always ready to welcome any new breed that has the merit of producing a large number of eggs.

A LIGHT POULTRY-HOUSE.

The design of a poultry-house in this issue is for a flock of fifteen fowls, the house being ten feet wide and sixteen feet long. But little explanation is necessary, as the illustration explains itself. It is well known that the hens are very partial to plenty of light in the poultry-house, and the design is to show how

eggs daily, and make it a rule never to disappoint a customer. One who goes into the business with the object of aiming to give full satisfaction will find a ready sale for all of his eggs at extra prices.

SUMMER SHELTER.

We do not favor having the hens roost on the trees, as they may be exposed to storms; nor is it always best for them to be in a close house in summer. The proper mode of providing shelter during the warm season is to have a shed, open to the south, which will allow plenty of air, as well as keep the fowls dry in wet weather. A shed is not expensive, and protects the trees from the accumulated filth around the trunks, as is noticed when the hens roost on the limbs. Even the turkeys should have shelter, yet it is a fact that the turkey seldom has any roof but the sky, even in the most inclement weather.

REFUSE FROM FACTORIES.

Refuse from the factories, such as brewers' grains, ground meat, etc., makes a cheap food for poultry; but the mistake should not be made of using such exclusively because of cheapness. It may not be always economical to procure certain foods because they are cheap, as the supply in the egg basket may diminish. The cheapest foods are those that induce the hens to lay. It is well, however, to use refuse material whenever it can be done, but it must be kept in view that the best results are obtained by feeding a variety.

PURIFYING THE YARDS.

If the hens are confined in yards, the best way to keep the yards clean and to prevent disease is to either spade them frequently, or to have two yards, and grow a green crop in one while the fowls occupy the other, alternating the yards as necessity requires. If the yard is small it is an excellent plan to scatter air-slaked lime over it once or more a month, so as to destroy the germs of roup, as well as the gape-worm.

LICE ARE MULTIPLYING.

From now on the weather will be very warm. It will provide just the conditions most favorable for the rapid multiplication of lice. Should the lice get possession of the poultry-house it will be almost useless to attempt to make the hens pay. To keep down lice one must be constantly on the watch. Spray the poultry-house every week, or use a watering-pot if necessary. Kerosene is sure death to them.

DRY DIRT.

Lay in plenty of dry dirt when the weather is very dry, and haul it during the middle of the day, so as to have it

free from dampness; sift it and place boxes of it where the hens can always freely dust in it. The hens use dry dirt to rid themselves of lice, and if given an opportunity to dust they will thrive better and lay more eggs.

CORRESPONDENCE.

LEARNING FROM EXPERIENCE.—Wife and I thought our fowls, which by the way are Wyandotte and Brahma, mixed, were not laying enough eggs, and we determined to try another breed. My father had four nice hens and a rooster, so I got thirteen eggs from him to set. Wife says, "Will, I wouldn't set thirteen eggs; make it twelve or fourteen." "Oh, nonsense," says I, "we'll set thirteen eggs, and as it is Friday, we will put the unlucky day and number together." "All right, you'll see," said wife. Well, three weeks passed away, and no chickens. Two days more passed, and still no signs of any chickens. I broke the eggs, and there was not a fertile egg in the lot. Well, readers, you should have seen the look on my wife's face when I announced the result. Then we got forty-five Brown Leghorn eggs, from a friend close by, who had two roosters with twenty hens. I set three hens on these eggs—this time on Saturday; not that my wife had convinced me that the number or day had anything to do with the former set, but I was glad afterwards that I did not set the same number or on the same day as at the first, for only five eggs hatched out of the forty-five. Nearly all of the eggs were unfertile. I asked wife what she had to say now. She declared it was better than the first set. Then we determined to set fifteen eggs from our own hens. The neighbors told us we were foolish to do it, as I only had one rooster with fifty hens, and they were kept shut up in a yard all the time, and we were getting from twenty to twenty-five eggs a day. But I resolved to try the experiment anyway, and so I set fifteen eggs under a hen, and in twenty days she began to hatch, and she hatched fourteen chickens out of the fifteen eggs, and the other egg had a dead chicken in it. I would like to hear what some of our poultrymen who advise us to keeping one rooster with ten hens have to say about that. W. P. Kingston, N. J.

INQUIRIES ANSWERED.

Black Minorcas.—S. P. S., Wilmer, Texas, writes: "Will you please give me the origin of Black Minorca fowls?"

REPLY:—They are very similar to Black Spanish, but have no white face. It is claimed that they are "Mediterranean," but they have been known in England for twenty or more years. The first importations to this country were made by F. A. Mortimer, Pottsville, Pa., who brought them from England.

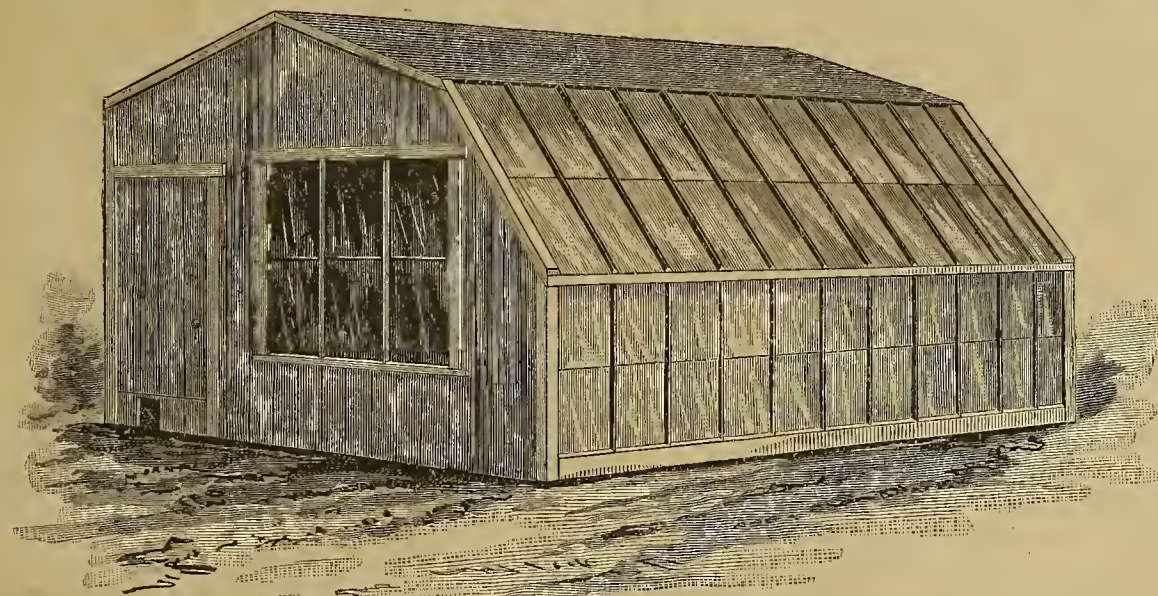
Sicilian Fowls.—S. D. D., Aurora, Indiana, writes: "Can you inform me in regard to Sicilian fowls, and where they can be purchased?"

REPLY:—The breed is not recognized in the standard, nor can we state who has them, as they are rare. It is an old breed, and strongly resembles the Leghorn. The color is buff, and it has a cup comb and light willow legs. In size they are a little larger than Leghorns, and are excellent layers of large eggs. The female, though light buff in color, is also penciled with black.

When you have tried the free package of Frank Siddall's soap and found it saves you a large amount of labor, then tell your neighbors and friends to write us a postal for a free trial package just as you did. We want to introduce it in every household. See page 7.

Asthma The African Kola Plant, discovered in Congo, West Africa, is Nature's Sure Cure for Asthma. Cure Guaranteed or No Pay. Export Office, 1164 Broadway, New York. For Large Trial Case, FREE by Mail, address KOLA IMPORTING CO., 132 Vine St., Cincinnati, Ohio.

If afflicted with sore eyes use **Dr. Thompson's Eye-Water**



A LIGHT POULTRY-HOUSE.

time, a soft, warm feed should be given first, and stinted rations given at frequent intervals. An overloading of the crop is always dangerous.

When poultry is to be fattened for market, they should be shut up in dark apartments by themselves for about ten days before killing. The object in keeping them in dark coops is to keep them quiet, as they fatten much quicker. Feed soft feed twice a day and give screenings at night. Give them pure, fresh water every day, as this is a very important item in fattening poultry. Do not feed them anything for at least twenty-four hours before you kill them. J. S. L.

VALUE OF THE RANGE.

A hen on the range keeps herself in condition for laying by being continually at work. If she is allowed too much grain she will become lazy, refrain from foraging, fattens, and soon ceases to lay. This is a matter that deserves attention. Keep the hens at work. When they seek insects, scratch, and travel over a wide area of ground, in order to secure a variety, they are not only lessening expenses, but also keeping themselves in the best order for laying. It is due more to the exercise than to the food which hens receive, to which may be ascribed the greatest value of a range. When hens are in confinement they are liable to be overfed, and it requires extra care on the part of those who manage flocks in summer to avoid overfeeding. We have found that when there is ample forage for hens they need no food at all in summer, as they will easily find all the worms, seeds and grass required. A good range in summer will provide eggs with little or no cost to the farmer.

BREEDS FOR FARMERS.

As a rule the farmer cares very little for gaudy plumage, or of standard points, though he desires his pure breeds to be free from blemish. In selecting a breed they aim more for utility than for beauty, yet some of the most prolific breeds are beautiful in shape and color. It is perhaps safe to claim that for beauty and utility combined, but few breeds surpass

easily a large portion of the house may be composed of windows. If such a house is used in the summer, the windows at the ends and the lower window in front may be removed and wire netting substituted. For winter the glass should be returned. This house is not as expensive as it appears, and is very cheerful to a flock during winter, when it may be necessary to confine the hens for months.

QUICK PROFITS.

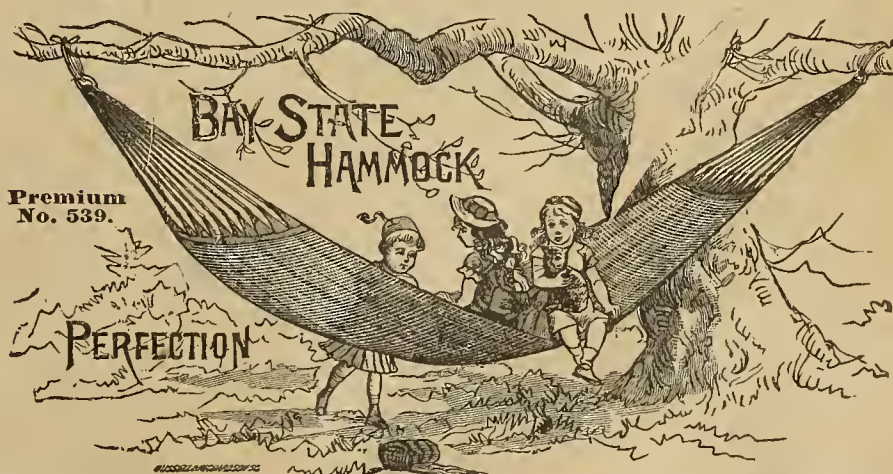
To secure the greatest profit, the aim should be to shorten the time of growth as much as possible, as the quicker a fowl reaches the marketable age the less the labor and smaller the cost. It is well known that a duck will consume twice as much food as a chicken and is, apparently, more expensive to keep, but when it is considered that a duck also grows twice as fast as a chicken, the cost to produce a pound of meat on a duck is no greater than for other poultry. Profits are not made by feeding fowls after they should no longer be retained. When fattening fowls they should be weighed every two or three days, and as soon as they show no increase in weight they should be marketed. There are business methods in poultry raising as in all other pursuits, and the largest profits are made when business methods are practiced. It should be the rule to keep nothing that does not pay, and when a chick is hatched it should be pushed right on, so as to get it into market in the shortest possible time.

MAKE A HOME MARKET.

There are usually more stale eggs in summer than in winter, as the warm weather causes them to begin to decompose sooner. If you are near a village or town you will find a class of persons who will be willing to pay an extra price for eggs which are known to be strictly fresh. This is an excellent season of the year for building up such a trade, but do not attempt to satisfy your customers by buying eggs for the purpose, as you will then surely find that you cannot supply fresh eggs, as stale ones will get in among them. Keep your own hens, collect the

FREE during July and August.—Send us at once a photograph or a tintype of yourself, or any member of your family, living or dead, and we will make for you one of our finest \$25.00 life-size **CRAYON PORTRAITS** absolutely free of charge. This offer is made to introduce our artistic portraits in your vicinity. Put your name and address back of photo., and send same to Tanqueray Portrait Society, 741 DeKalb Ave., Brooklyn, N. Y. References: Rev. T. DeWitt Talmadge, all newspaper publishers, Banks, and Express Companies of New York and Brooklyn.

A PERFECTION, CLOSE-WOVE HAMMOCK \$1.50
Together with this paper one year, for only



Cool and comfortable, strong; closely woven instead of knit, it cannot catch and pull off the buttons. It is 11 feet long, 3 feet wide, and will easily sustain the weight of the heaviest person, and withstand the strain of 400 or 500 pounds. Has patent iron ends.

Given as a premium for 6 subscribers to either the Farm and Fireside or the Ladies Home Companion, at 50 cents each.

Price, including one year's subscription to either paper, \$1.50.

We offer it for sale for only \$1.35. Postage or express paid by us in each case. Give your express station if different from post-office address.

FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Millet.—P. G. S., Fort Plain, N. Y., writes: "When is the best time to cut millet for winter feed for cows?"

REPLY:—Cut it when in bloom. When cut before it goes to seed, millet makes excellent hay.

Hickorynuts.—S. L. W., Jamesville, N. C., writes: "K. H., of Nustrand, Minn., wants to know where he can get hickorynuts in large quantities for planting. There are hundreds of bushels here on the banks of the Roanoke river every fall. The nuts are much smaller than those of the highland hickory, and the wood is considered much better."

Cabbage Queries.—P. A., Greenville, Pa., writes: "(1) What causes club-foot in cabbage, and can it be prevented? (2) What will prevent the ravages of the cabbage-worm?"

REPLY BY JOSEPH:—(1) The disease known as club-foot, or club-root, is caused by a fungus. To prevent it, plant on soil on which cabbages, cauliflowers, radishes or turnips have not been grown for a few years. (2) For cabbage-worms, dust the infected heads with buhach (California insect-powder), or sprinkle them with the kerosene emulsion.

Green Manuring for Wheat.—N. O., Valley City, N. D., writes: "I would like to know what kind of green manure would be best for the wheat-fields in North Dakota. Two years ago I plowed down millet on a piece of summer fallow. I raised an immense crop out of it, far ahead of that on the common summer fallow, and this year I can see that the grain is doing better on that piece. Millet is good in this respect, that the seed costs very little and it grows fast. I have been thinking that other plants might be richer in leaves, and consequently, take more nourishment from the air. Perhaps millet is the plant that will do best in North Dakota's comparatively dry climate. I was born in Sweden, where the land has to be manured. Although the land here is very rich, I don't believe in cropping it year after year and not return anything to the land."

REPLY:—Use millet, if that brings you good returns. Also, try field-peas. Peas, clover and other leguminous crops accumulate nitrogen from the air; millet does not.

Setting Asparagus and Currants.—A subscriber in Three Oaks, Mich., asks: "What time of year and how should an asparagus bed be started?—Which is the quickest way to get currants into bearing, and should they be planted in fall or spring?"

REPLY BY JOSEPH:—You can plant asparagus in fall or spring. Buy good, strong plants, and set them six or eight inches deep in rich, well-prepared soil, say two feet apart and the rows five or six feet apart. Manure well every year and give clean cultivation. The second season after planting they will give a partial crop, and a full one the year after.—The quickest way to get currants into bearing is to procure as large plants as can be had, and set them in good, well-prepared ground. If you do this this fall, as soon as the leaves have fallen, you may get quite a respectable crop next year. The two-year plants which you can buy at the nurseries should give you a partial crop the year after planting, and a fair crop the year following. The smaller the plants, of course the longer you will have to wait for a full crop. By starting a plantation from cuttings, it will require three or four years before you can get a respectable crop.

VETERINARY.

Conducted by Dr. H. J. Detmers,
Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the querist should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column, must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances.

A Dry Teat.—W. H. K., Cottageville, Ky., writes: "Leave that dry teat of your cow alone, and see to it that the three good teats are always properly milked, and the loss of milk caused by the one teat not being in use will be insignificant."

Heaves and Unsuitable Food.—P. G. M., Detroit, Minn. Your pony is affected with heaves, an incurable chronic difficulty of breathing. An improvement will be effected on grass. Wheat straw is no food for horses; no wonder that your pony got poor. Next winter feed sheep oats instead of straw, and particularly avoid dusty and musty hay.

Lung Trouble.—G. A. N., Chaucery, Ohio. A definite diagnosis cannot be based upon one single symptom, especially if the same is simply a cough. Your heifer has some lung trouble, but whether the same consists in tuberculosis or in bronchial pneumonia, or is caused by the presence of lung-worms, Strongylus micurus, or something else, cannot be decided from your communication. If you desire a definite diagnosis, have the heifer examined by a veterinarian.

Paralytic Hogs.—C. G., Algonac, Mich. It is exceedingly doubtful whether anything can be done with your hogs. Your description leaves me in doubt in regard to the cause of the paralysis or weakness in the hind quarters, whether it is an affection of the spinal cord, or whether your hogs are trichinosis, or perhaps rhabditic in a high degree. You say the hogs are ten months old and have been ailing six months. I would advise you to kill the worst one, and have it examined by a competent person.

Probably a Tumor.—M. S. B., Lake Chute, Ohio, writes: "My cow has a lump between the two back teats, a little larger than a quail's egg, and loose, smooth and hard inside. It is necked, and nearly two inches long. It does not seem to be sore at all. It has been growing one year."

ANSWER:—What you call a lump seems to be a tumor, which either must be left alone, or be cut out by a veterinarian.

Sores on the Feet of Cattle.—A. E., Preble county, Ohio. What you call "greased heel in cattle" will be cured by applications to the sores or pustules, twice a day, of a mixture of liquid subacetate of lead, one part, and olive-oil, three parts, provided you keep your cattle out of the mud and in a dry place, where their feet will remain clean and not be irritated or wounded. No cure can be effected as long as the cattle are kept in or have access to wet and muddy places.

Want Books on Veterinary Medicine.—A. D., Ozone Park, N. Y., and G. M. B., Somerset, Ohio. The only way to study veterinary medicine is to take a regular course in a good veterinary college. It cannot be studied from books alone. If you desire to buy popular books, ask a bookseller for a catalogue and make your selection. I am not familiar with such books as you want. I regard them as of very little value to me, at least, and have neither money to spare to buy them nor time and inclination to read them; consequently, I am not in the position to recommend any one in particular.

Chronic Rheumatism.—W. N. B., Leona, Ky. What you describe looks like a case of chronic rheumatism. There is no rational treatment, because the real nature of the disease is as yet unknown. Therefore, the effect of any internal treatment is, to say the least, very unreliable. Regular feeding, food easy of digestion, moderate exercise, good grooming, protection against wet, cold, and sharp draughts of air, and now and then a counter-irritant judiciously applied, will probably effect some improvement, and maybe even a temporary cure. If you find that the soles of the hoof are flat and tender, but the frogs are strong and well developed, good and well-made bar shoes will considerably ease the animal.

Heaves and Lameness.—L. B. P., Patterson, Iowa, writes: "I have a mare, eight years old, which coughs when fed on hay. When on grass she coughs very little. She was fed on musty hay last winter. She also is lame in front parts, and upon examination, can find no cause for it, except that on each side of the frog of the foot there are white spots, which are raised a little higher than the rest of the surface. Is this the cause?"

ANSWER:—Your mare is affected with heaves. Send her to pasture. You should not have fed her with musty hay, which is no food for horses. How can you expect me to tell you what causes the lameness of your mare and what will cure it, if you give no description. What you call white spots is nothing.

So-called Paper-skin, or Lombrige.—S. H. W., Keosauqua, Iowa. What you complain of is so-called paper-skin, or lombrige, as it is called in Texas and Mexico. It is worms, Strongylus contortus, in the fourth stomach, and lung-worms, Strongylus filaria, in the bronchial tubes. If you keep your flock of sheep, but especially the lambs, away from low, wet and sloughy places, and from pools of stagnant water, those cases probably will not occur. The worms in the stomach may be expelled by medicinal treatment; for instance, with tartar emetic dissolved in distilled or rain-water, at a ratio of eight grains to an ounce of water. The dose would be, for good-sized lambs, one ounce, and for old sheep, two ounces of the solution, to be given on an empty stomach. Against the lung-worms nothing can be done.

A Milk-producing Heifer.—G. A. V. F., Salem, Mo., writes: "I have a Jersey heifer, thirty-two months old, that is not in calf, yet her udder is somewhat enlarged and filled with milk. I have milked it out only twice, and got about a pint at each milking; am certain she could be 'brought to her milk.' Now, what I want to know is this: Would it in any way injure her future usefulness as a milch cow to have her give milk before she brings a calf?"

ANSWER:—If there is danger of garget since you have milked the heifer, it may be better to keep up the milking. If there is no such danger, I would advise to leave her alone. Is it not possible that the heifer has been with calf and has, perhaps, aborted without you knowing it? Still, similar cases have been reported before.

Subject to Colic—Worms.—C. P., Pavilion, N. Y., writes: "I have a six-year-old mare that occasionally has colic. It comes on seemingly without cause. I do not change feed or overwork her. Is there anything I can do as a preventive?—She is troubled quite badly with worms in the rectum."

ANSWER:—Frequent attacks of colic, as a rule, are due to the existence of an aneurism in the anterior mesenteric artery, and as such an aneurism cannot be removed, a reliable preventive is out of the question. Regular feeding, regular exercise and food easy of digestion—in fact, avoiding anything calculated to cause any irregularity in the circulation of the blood—is all that can be done. Horses subject to colic may be expected to die, sooner or later, of that disease.—Worms in the rectum are best removed by a few injections of raw linseed-oil.

Stiff and Suffering from Metritis.—O. E. H., Lausaug, Col., writes: "I have a mare that has been stiff about three weeks. One week ago she gave birth to a colt, but two weeks before she foaled she became stiff and her legs swelled up. Since foaling, the swelling has gone, but she is still stiff, and there is a roll swelled on the right side, commencing close to the udder and reaching almost to the front legs, a little above the milk-vein."

ANSWER:—The stiffness, probably, will disappear if the mare has outdoor exercise in a good pasture in day-time and is kept in the stable at night and in bad weather. The discharge, probably caused by metritis, is more serious. I would advise to make, first, injections with warm water, so as to thoroughly irrigate the womb, and this done, to make injections of a solution of carbolic acid, 1 to 75; or of corrosive sublimate, 1 to 1,500. Whatever is used, it should be used blood-warm, and be injected carefully. The injections may be repeated once a day until improvement can be noticed.

Cough.—H. L., Salina, Kan., writes: "Will you please give me a good remedy for my pony, which has a cough? Five or six weeks ago he was driven to town pretty fast, and was left in a cold rain. Since then he has been coughing. The other night he was in the rain, and now he is getting worse. Do you think this cough might cause the heaves? He does not do anything except to be ridden a short way or to town, which is only two or two and a half miles. When he gallops he coughs worse than when walking or trotting. His feed has been corn twice a day and some green rye and leaves and prairie hay; now he has alfalfa, hay and corn."

ANSWER:—I have repeatedly stated in these columns that a diagnosis cannot be based upon any one single symptom, especially if that symptom is one which, like a cough, belongs to quite a large number of diseases. Your pony probably suffers from chronic bronchitis or, maybe, laryngitis. Avoid everything which, according to your own observations, causes the cough to become more severe, and, if possible, keep the animal on green and juicy

YOU CAN HAVE ONE FREE

Write for our FREE Illustrated Catalogue.



WE GIVE A BUCCY
(as shown in illustration.)

To any one who will sell eight (8) for us. Regular price for this buggy is \$90.00, but we are selling it when cash is sent with order, for **\$45.25**. We do it to introduce our goods and to show **How Money Can be Saved** by buying the **CELEBRATED**

FOSTER BUGGIES, CARRIAGES AND HARNESS

We are the originators of selling first-class work direct from our factory at factory prices. We use only the best material, and our guarantee is placed on all vehicles. We sell Buggies and Carriages for **\$45.25 AND UPWARDS**. If you **WANT A BUGGY FOR NOTHING**, order a sample and sell eight (8) for us. The money paid for sample can be deducted when you order the eight, (same as sample). Address **FOSTER BUCCY & CART CO., No 23 Pike building, CINCINNATI, O.**

food, either in a good stable or in a good pasture. To say it over again, avoid any exposure to wet and cold, severe exercise, and dry, musty and dusty food. Medicines can have but little effect, and will have none at all unless the animal is kept under proper hygienic conditions.

Pustulous Exanthema.—J. H. C., Augusta, Ga., writes: "Please tell me what to do for a horse that has a breaking out on his head and belly. The sores come about as big around as a dime. At first they are bloody, and then get dry. She also has trouble with an eye. It runs water and matter from the lower corner."

ANSWER:—What you describe seems to be a pustulous exanthema. It is true, similar eruptions also occur in glanders, but the same are rather rare. You may wash the affected parts two or three times a day with a one-half-per-cent solution of carbonate of soda, and if this should not have the desired result, you may use instead of the carbonate of soda solution a one-per-mille solution of corrosive sublimate in rain or distilled water. If the affected portions of the skin are rather limited—not extensive—excellent results have been obtained by a use of liquid subacetate of lead, one part, to olive-oil, three parts, also to be applied two or three times a day; but where a large portion of the skin, say one-third or one-fourth of the whole body, is affected, the use of oil or any other kind of fat is not to be recommended. Whether the watering of the eye has anything to do with the disease or not, does not appear from your communication. You may try an eye-water composed of nitrate of silver, two grains, and distilled water, one ounce, to be applied two or three times a day by means of a small glass pipette, capped with a rubber bulb. Your druggist will show you how to use it. Don't listen to the "hooks" man.

Actinomycosis.—Mrs. H. L. N., Cary, S. D. What you describe is a case of actinomycosis, or so-called lump-jaw. If the tumor is movable, a cure may be effected by the treatment repeatedly published in the FARM AND FIRESIDE, but if the swelling is immovable and in the bone, it must be considered incurable. Although the treatment has been repeatedly published, I will once more give the same in these columns.

THE TREATMENT OF ACTINOMYCOSIS.
The best method consists in removing the tumor and in destroying the actinomycetes by means of caustics. It is a method which I have applied in a vast majority of the cases treated, and which has always been attended with good results. I first prepare the caustic before I proceed to operate. It is an arsenious acid compound. I take, say, half an ounce of pure, unadulterated arsenious acid; to this I add, to make it more soluble, two drams of caustic potash (in sticks), and to make it sticky, and to dissolve as much of it as I can, I then add half an ounce of genuine powdered gum arabic (gum acacie) and one ounce of distilled water. Properly mixed, this compound will make a semi-fluid, sticky mass of the consistency of a thick syrup. To facilitate its application, as will be shown further on, I put it in a salt-mouthed vial, which must be properly labeled "poison." I then prepare a stick of bard wood, about eight or nine inches long, one inch wide and one fourth to one third of an inch thick, smooth the edges, thin one end so that it tapers to a point from both sides, so that it presents the shape of the blade of a dagger. This tapering end should be perfectly smoothed with sandpaper. What is further needed is a good, sharp and pointed knife (an abscess bistouri), a bunch of absorbent cotton, another tapering stick, or what will do just as well, a common, dull-pointed seton-needle, a bucketful of water and a few good, strong ropes. The latter are used to tie the head of the animal to some good, solid post, because the tumor is painful, and if operated, even the most docile animal may be expected to offer forcible resistance. The bucketful of water should be kept within easy reach of the operator, so that he may be able to immediately clean his hands if they should come in contact with the arsenic compound. After the animal has been securely fastened, a strong man should take hold of both horns, so as to keep the head steady. I then make an incision about one inch, an inch and a quarter, or even, according to circumstances, an inch and a half in length into the center of the tumor, so as to empty at once the contents of its internal cavity. These contents consist of a thick, somewhat ropy, whitish yellow and purulent substance, usually full of nests of actinomycetes. This incision made, I take my tapering stick, wrap around the point of the same a small bunch of my absorbent cotton, dip it into my arsenic compound in my salt-mouthed vial (this is the reason why the vial should have a mouth at least an inch or more in width) and push the tuft of cotton with the arsenic compound adhering through the incision into the cavity in the center of the tumor. If the tumor has been repeatedly opened, is destitute of a cavity and has a raw, bleeding and cauliflower-like surface, the cotton must be lodged as near the center as possible. If the tapering stick is very smooth it can be withdrawn without pulling out the cotton. It is safer, though, to keep the latter hack in the cavity by means of the second tapering stick or with the dull-pointed seton-needle, but it is not advisable to do it with the finger and get the arsenic compound on the hand. Unless the tumor and its cavity is rather small, or the first prop of cotton introduced is large and well saturated with the arsenic compound, I introduce (push in) in the same way a second, third, and maybe a fourth prop; or if the tumor and its cavity are very large or my props rather small, I may even push in as many as five or six props, but usually two or three are sufficient. This done, the operation is finished and the animal can be released. Within about three days the operated tumor will be swelled to double or more its former size, but after the fourth day the swelling will gradually decrease. In about two weeks the tumor will be somewhat smaller than it was before the operation, besides that it will be hard and painless and a line of demarcation will be forming between

FARMERS' WIVES. How to make money on top of your cook stove. Write **AMERICAN MFG. CO., Waynesboro, Pa.**

BINDER TWINE shipped anywhere to anyone, in any quantity at wholesale prices. Send stamp for samples or write for prices. **CASH BUYERS' UNION, 163 W. Van Buren St. E. 11 Chicago.**

ENGINES If you want to buy a strictly first-class outfit at low figures, address **The W. C. LEFFEL CO., Greenmount Av. SPRINGFIELD, O.**

For Eight Cents

We will send you a hundred samples of really artistic wall papers. The prices are from 5 to 50c. a roll.

A. L. DIAMANT & CO., 1206 Market St., Phila.

SYLPH CYCLES RUN EASY
Vibration overcome without complication, loss of power or ungainly features. Highest grade in material, construction and finish. All users delighted. Investigate. Agents wanted. Cata. free.

HOUSE-DURVEA CYCLE CO. 32 E. St., Peoria, Ill.

Newcomb Fly-Shuttle Rag Carpet LOOM
Weaves 100 yards per day. Catalogue free.

C. N. NEWCOMB, 311 W. St. Davenport, Iowa.

BEFORE YOU BUY A NEW HARNESS

Send a 2c. stamp with your address for 72-page Illustrated Catalogue of 65 different styles of hand-made **PURE OAK LEATHER HARNESS**. Single Sets, \$7 up. Double Sets, \$14 up. Every harness Warranted and Shipped subject to approval. It costs only a 2-cent stamp to know what we can do for you. **TRY IT.** King & Co., Wholesale Mfrs., No. 5 Church St., Oswego, N. Y.

Mention Farm and Fireside.

SOLID GOLD

275

Solid gold watches cannot be bought anywhere for \$2.75. This is not a solid gold watch but is warranted 14 karat gold plated; it is equal in appearance and cannot be told from solid gold except by experts. Cut this out and send it with your order and we will forward the watch to you by express C. O. D. You examine it at the express office and if you do not find it equal in appearance and as good a time-keeper as many high priced, solid gold watches, and for superior to hundreds of watches advertised at \$5 and upwards, leave it, and you are nothing out, but your time is looking at it; on the other hand, if you are satisfied that it is a bargain, pay the agent \$2.75 and the express charges and it is yours. Address

*** THE NATIONAL MFG. & IMPORTING CO., 334 Dearborn St., Chicago, Ill.**

the tumor and the surrounding healthy tissues. This line presents itself as a whitish-gray circle around the tumor. After this the tumor will continue to shrink and grow harder, but the demarcation line will become more distinct and somewhat deeper. Gradually the tumor will be pushed out further and further by the healthy granulation that is taking place beneath and behind it, until its connection with the surrounding tissue is completely severed, when it will drop out. This usually requires from six to ten weeks. The time, it seems, depends upon the size of the tumor and the toughness of the skin. After the tumor has dropped out the wound will heal in a few days, and a comparatively small, but somewhat puckered, scar will be left behind. As the skin covering the tumor is destroyed, and consequently lost with the latter, the healthy skin left will be drawn together from all sides, hence the puckered appearance and the small size of the scar. I have operated on animals with tumors as large as a good-sized turnip, and still the scar could afterwards only be found on close examination. Animals thus operated have invariably been just as thrifty as any other animal that never had been affected, a sure indication that the disease is nothing but a local affection. If, however, the morbid process is in the tongue or in the jawbone, any treatment beyond what I have called the first method is out of the question, except the disease is just starting in the jawbone and its presence is discovered before it has spread beyond the alveole of a tooth. In that case a prompt extraction of the tooth and plugging the alveole with absorbent cotton saturated with carbolic or with creosote, constitutes the remedy. While the actinomycetes are yet young, creosote and carbolic acid are sufficient to destroy them, but the same remedies have apparently but little effect; at any rate, do not effect a cure if applied to old cases of actinomycosis.

Husbands who want to save their wives all unnecessary labor should read about the new way of doing the family washing, as explained on page 7 of this issue, and persuade them to give it a trial. It will cost nothing.

Our Miscellany.

THREE hundred women in the United States own establishments for the raising of flowers and plants. So remunerative is this healthful, interesting and feminine industry that the wonder is more women do not engage in it.

EASE YOUR COUGH by using Dr. D. Jayne's Expectorant, a sure and helpful medicine for all Throat and Lung ailments, and a curative for Asthma.

At least 90,000 Americans annually go to Europe to make the grand tour. This army of pleasure-seekers pay \$12,000,000 to the steamship companies and \$36,000,000 in hotel bills, presents and tips, the expenses of the ordinary traveler averaging \$8 per day for forty days. Four million dollars may be safely charged to presents. It will thus be seen that the total amount expended is about \$50,000,000.

ARIZONA is planning to reproduce for its building at the Columbian exposition the famous Casa Grande, which stands in the southern part of the territory. The Casa Grande, which is probably the most remarkable and interesting prehistoric ruin in North America, was first visited by Europeans in 1538, by Cabeza de Vaca and his followers, of the ill-fated Ponce de Leon expedition. Four years later, Coronado, during his expedition to the Southwest, made it his headquarters. Then, as now, not even a tradition as to the race that built it remained among the surrounding tribes. The building was once the main gateway to an immense walled city, the ruins of which still cover the plains, and to such an extent that in the accurate estimation of scientists the city's population must have exceeded a hundred thousand. The remains of vast irrigating ditches and cemented reservoirs are found in the vicinity of the ruined city. By clearing one of the irrigating ditches recently, 150,000 acres of land were reclaimed. The ancient irrigation system will be shown by relief maps. The ruins of Casa Grande are between five and six stories high and fifty feet square. They are composed of sun-dried brick, with heavy buttressed walls, and like all the other ancient ruins in that country, bear evidences of having been destroyed by fire, for the charred remains of rafters still cling to the walls. All about, for miles and miles, are strewn broken pottery, arrow heads and stone axes, which tell scientists that one day, thousands of years ago that city blazed with fire and was deserted by a panic-stricken people. Casa Grande is the most famous feature of all those old sun-baked ruins, and its unknown origin, the sudden and unaccountable flight and dissolution of the inhabitants of the city it guarded, and the deep mystery which has clung to it for ages, make it one of the most interesting subjects of scientific investigation. It will be, perhaps, on its reproduction at the fair, the most interesting building in which any of the states or territories will make headquarters. The Arizona exhibit will include minerals, semi-tropical fruits, petrified woods, onyx, meteoric iron, etc.

CREAMERIES, THE SILO AND THE BABCOCK MILK-TESTER—A BUSINESSLIKE BASIS.

The importance of the dairy industry has never been overstated, and it bids fair even to increase. With the growth of cities and large towns over the country there is a continually increasing number of people who must have the product of the farmer's dairy; and with the increase of wealth and the cultivation of good taste, there are more and more people who want the choicest products. Hon. John E. Russell was recently reported in the *Farmer and Homes* as advising farmers to cater for the business of the wealthy, who are desirous to get and willing to pay for the gilt-edged articles from our farms.

The introduction of the co-operative creamery system has been a godsend to thousands of farmers, improving the average butter product, giving the farmers regular and cash payments, and relieving the family of the drudgery of butter making. The silo has been another advance step of much importance, as it has done much to enhance economy of feeding, and has therefore helped many to produce their milk or butter at a lower price. Lastly, the Babcock milk-tester has been an invention of much consequence, as it has put in the hands of every butter maker the means of learning readily whether or not each cow on his farm is a profit to him.

But the test has another use of even more importance. It makes possible the plan of paying each patron of a co-operative creamery for the exact value of the cream he furnishes. There is much difference between different "spaces" of cream; one may have 12 percent of butter fat, while another may have 20 percent. But by the present co-operative creamery system all are paid the same. With a Babcock tester the 12-percent man gets only 12 percent of the money, and the 20-percent man gets only 20 percent of the money.

This is more just than an even divide.

If every dairy farmer in the land would resolve to reduce his herd to simply the cows that pay a profit on what they consume, we would see a big revolution in the profits of the business; many thousands of farmers do not know what kind of cows they are keeping, nor where the big leaks are that are running away with all their profits.

When we couple with this advance the paying of each cream producer according to the exact value of his product, there will be better times ahead, and farming will be as profitable as any other business, or a little more so.

Progressive dairymen are fast catching on.

TIN-PLATES.

"There are three classes of men who oppose the manufacture of tin-plates in this country," remarked a dealer in tin cans, "the British tin-plate manufacturer, the eastern importer of tin-plates and the free-trade newspapers and orators." This is an interesting trinity. In which the third party works in the interest of the first two, whose interests are foreign, against those whose interests are American. These elements are laboring to prevent a building up of an extensive tin-plate industry in this country. The British hostility is natural; it has been monopolizing the tin-plate industry of the world for years to its great advantage, and it naturally desires to continue that sort of thing. The importers in the eastern cities, now organized under the name of the tin-plate consumers, which is misleading, handle the British tin-plates, and share the profits of that monopoly. Of course, they will lose these profits when the tin andterne plates used in this country are produced by factories in Indiana, Illinois, Ohio and other states, and sold direct to the tin-can manufacturers and the jobbers.—*Indianapolis Journal*.

VIEWS OF OTHERS.

Could everyone of our readers view with their own eyes the magnificent picture, "Columbus at the Royal Court of Spain," framed in the rich, heavy, gold, six-inch frame, it would awaken a desire in every home to possess one. The many who have already purchased and received them are overwhelming us with letters of praise and commendation, thereby proving them to be even more than claimed. This is an opportunity of a lifetime to secure a veritable work of art from one of the greatest living artists. It is a picture that should adorn the home of every American citizen.

We offer one of these beautiful pictures, mounted and framed, with wire, screws, etc., ready for hanging, for only \$1.50, to any one who will endeavor to introduce the picture. It is the grandest bargain ever offered. See the full description and additional offers in our issue of July 1st and send at once for special terms to agents. We want an agent in every town in the United States.

LEXINGTON, KY., June 17, 1892.

Picture received yesterday, and to say I like it or am well pleased with it does not express it. I have been in the art business off and on for ten or twelve years, and consider myself capable of judging the finer grades of work.

JOS. W. WOLF.

BRACEVILLE, ILL., June 24, 1892.

I received the order books all right. I had filled the first and have 11 names to start the second. * * * The picture takes. It pleases everybody, which makes the business of selling it a pleasure instead of a task.

J. P. CUMMING.

Mr. Cumming filled his first book of 20 orders and telegraphed for 6 more books. We are receiving orders daily for "more order books."

MARSHFIELD, WIS.

I received the picture all right and am greatly pleased with it. It is certainly a most beautiful picture, and considering the low price and fine workmanship throughout, it is certainly a great bargain for any one, rich or poor. * * * Have already taken several orders.

B. B. JONES.

NEWFIELD, N. J., June 24, 1892.

The picture, "Columbus at the Royal Court of Spain," has been received in excellent condition. It is a very fine work indeed, and I was agreeably surprised at the frame, which is very handsome and well worthy the picture. All that have seen them express their surprise at the low price.

A. E. PETTENGILL.

NAVARE, O., June 18, 1892.

The picture received this A. M. It is far superior to what I had really expected.

FRANK M. COOL.

BREEDS, ILL., June 19, 1892.

I received the picture outfit all O. K., and I do think it is a dandy.

F. M. SMOTHERS.

BARNESVILLE, O., June 21, 1892.

The picture came to me last Saturday, and I think it a grand picture; so do all who have looked at it.

J. W. LAISHLEY.

ALTON, KY., June 21, 1892.

The framed picture, "Columbus at the Royal Court of Spain," came to hand in good order, and will say it far surpasses expectations. It is beautiful. Any one that has any taste for fine art will surely have one.

S. JENSEN.

INGALLS, MICH.

The outfit received in good condition. I think it is a marvel in every respect.

PETER V. OLSSON.

DELAWARE, N. J., June 16, 1892.

I received your picture entitled "Columbus at the Royal Court of Spain." I am very much pleased with it and would hate to part with it if I could not get another one like it.

OPHA R. B. SMITH.

CLARE, MICH., June 28, 1892.

The picture, "Columbus at the Royal Court of Spain," came all right. It is a very nice work of art. The more one studies it the better it looks.

MRS. T. A. SUTHERLAND.

NATURE'S MAKE OF "BEESWAX."

What funny things sometimes get afloat upon the "chopped sea" of newspapers. I have read your "Nature's Make of Beeswax" story in April 15th issue, copied from the *Detroit Free Press*. It is a funny thing indeed to one who has for many years lived on the Nehalem river, near the beach where the scattered loading of the "old beeswax ship" has been plowed up and dug up from the low sand flats a little above present storm tide.

It is not "washed ashore at high tide," but found buried in the sand and recent soil, from which pieces may be torn out by the frequent storms and tossed back upon the beach. Many tons of it have been found, and marketed at but little below the price of fresh beeswax. Some of the pieces show more or less of the shapes in which they were molded, and some retain the brands, or characters of some sort, generally thought to be Chinese.

This valuable wreckage is found upon or near to the same ground where an Indian story says that a safe full of gold and costly jewels was buried by a few men who escaped with the treasure from a pirate ship, which, being disabled, tried to run into the Nehalem river, and went to pieces on the beach. Much search has been made for the safe, but thus far the old beeswax ship has panned out better than the golden pirate.

T. J. ALLEY.

LITERARY YOUNG MAN—"Miss Jones, have you seen 'Crabbe's Tales?'"

Young lady (scornfully)—"I was not aware that crabs had tails."

Literary young man (covered with confusion)—"I beg your pardon, I should have said read 'Crabbe's Tales.'"

Young lady (angrily scornful)—"And I was not aware that red crabs had tails, either."

Exit young man.



Presidential Souvenir Spoons

A Souvenir, commemorative of the coming election for Republican or Democrat, containing the engravings of the nominees for President and Vice President together with our National Emblems, the American Eagle, the Star Spangled Banner and the United States Capitol at Washington, appealing to the patriotism of all American people.

Something New, Just Out and at a price within the reach of all.

The spoon is the purest grade of Triple Plate Silver engraved by our own skilled workmen. It is a work of art and every lover of Handsome Silverware and Collector of Souvenir Spoons should send for one.

Sample by Mail Prepaid, \$1.00. Address **W. HILL & CO.,** Wholesale Jewelers, 207 State Street, CHICAGO, ILL.

PORTRAITS PICTURE FRAMES
Lowest Prices. Outfit FREE. Good Salary. Write today and secure general agency. Catlg. FREE. **ROBT. JOHNS, Mfr.** Dept. 13, 51 & 53 S. May St., CHICAGO

THE SCIENTIFIC CORN HARVESTER.

Great Saving over Old Methods
Rides on Wheels.
Pulls Easy.
No sudden starts or jerks.



Knives Protected.
Guards to gather down Corn.
Operators sit at work.
Much Easier and Better.

THE FOOS MANFG. CO., SPRINGFIELD, OHIO.
LICENSED BY AMERICAN CORN HARVESTER CO.

Don't Buy a Law Suit BUT BUY YOUR CORN HARVESTER WITH STAMP OF American Corn Harvester Co. ON IT.

It insures you first-class machines, and is a guarantee against embarrassment on account of infringement.
AMERICAN CORN HARVESTER CO., Springfield, Ohio.



A WONDERFUL OFFER FOR 60 DAYS ONLY.

SOLID GOLD FILLED
LADIES' OR GENTS' SIZE

WALTHAM WATCH
SOLD BY OTHERS FOR \$35.00.

CUT THIS OUT and send it with your order, and we will send this genuine Waltham Solid Gold Filled Watch by express for your examination. You examine it at the express office and see for yourself that this is the Bargain of the 19th Century. If, after examination, you are convinced that it is a bargain pay the express agent \$9.95 and the express charges, and the watch is yours; hear in mind that this is a genuine Waltham Gold Filled Watch, the cases are hunting style, magnificently engraved and guaranteed by special certificate to wear for 20 years. The movement has dust band, straight line lever escapement, double jeweled balance, patent safety pinion, sunk second hand, metal dial cut compensation expansion balance, stem wind and stem set, and all the modern improvements that have made the Waltham Watches famous the World over as being the best timekeeper on Earth. With each watch we send our mammoth catalogue, with testimonials selected from over 50,000 received last year, also a Printed Agreement giving you the privilege of returning the watch at any time inside of One Year if it does not give entire satisfaction. A Pleased Customer is Our Best Advertisement. Write to-day, this will not appear again. Address **THE NATIONAL MFG. & IMPORTING CO.,** 334 Dearborn St., Chicago, Illinois.

\$9⁹⁵

The Latest and Best Book of BUILDING PLANS. Dwellings from \$650 to \$3,000.

SAVE MONEY. ERECT THE BEST BUILDINGS AT LEAST COST
Premium No. 447.



by avoiding mistakes. "ARTISTIC DWELLINGS" is a book of entirely new and modern plans by one of the leading architects of the day, who, with his large experience and intimate knowledge of the wants of a large majority of builders, has drawn these plans, and given careful estimates of the cost of building, based upon the cost of materials in various localities. Views, Floor Plans, and Estimates are given of 56 Modern Dwellings and 4 Stables, all designed with the view of securing the best, most convenient handsome buildings at the lowest possible cost. And, in addition, a large number of plans prepared especially for our subscribers, of Barns, Corn-cribs, Grain, Poultry, Ice and Smoke Houses, Well Caisns, Grouse Arbors, Summer-houses, Closets, etc. A valuable feature of the barn plans are the drawings showing the manner of framing and giving sizes of timbers, etc., thus making the building an easy matter.

We offer the complete book and Farm and Fireside or Ladies Home Companion one year for only \$1. only a very small part of the cost of preparing one of the plans; or give it as a premium for five yearly subscribers to either paper. Address **FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.**

Smiles.

THE LAMBS' DITTY.

Little drops of water,
Little grains of sand,
Make the mighty ocean
And the pleasant land.

Cent per cent of water,
Lots of gall and sand,
Make the stocks of Wall street
And the broker bland.

—Life.

HIAWATHA UP TO DATE.

Thus departed Hiawatha
To the land of the Dacotahs,
To the land of handsome women;
And in ninety days returning,
A divorcelet he brought with him.
To his wife he gave the ha-ha,
Sent her back unto her ma-ma,
In the outskirts of Chicago.

—New York Herald.

"There's much," she said, "in politics
To rouse my curiosity;
"A 'deal' I cannot understand;
What is 'protection,' tell me, and
What's 'reciprocity'?"
Just then his arm slipped round her waist
With lover-like velocity;
"That's protection, dear, and this"
(Just then the maid returned his kiss)
"Is reciprocity."

—Lippincott's Magazine for June.

HE MADE THE SALE.

FXASPERATED WOMAN OF THE
HOUSE—"I have told you a dozen
times I don't want the machine!
Sick him, Tige!"
Peddler (while the dog is
gnawing his leg)—"Don't want
the machine, ma'am? Pardon
me, you haven't seen half its
good points. It washes the clothes
cleaner than any other, and in
less than half the time. It never
tears off a button. It—"

"Good heavens! Don't you see what the dog
is doing?"

"Yes. Quite a playful animal. This machine,
ma'am, uses less soap, takes up less room—"
"He'll tear you to pieces if you don't go!
Run, for mercy's sake! He's tasted blood and
I'm afraid I can't make him stop now!"

"I have to put up with such things, madam,
and it's in a good cause. This machine is the
best one that ever was invented. If I can suc-
ceed in introducing one into a family I feel I
have done a benevolent act. You can use any
kind of water, hard or soft, hot or—"

"O! O! O! He'll kill you! What is the ma-
chine worth?"

"It's worth a million dollars in any family,
but I'm selling it for only \$5, and—"

"Here's your money. I'll take it. Tige!
Tige! Let go!"

"Let him chew, ma'am; let him chew. It's
a wooden leg. I've got another one at home
all ready for use when this one is worn out.
Looks as if we were going to have rain."—*Chi-
cago Daily Tribune.*

AN UNEXPECTED REBUFF.

A small Scotch boy was called to give evi-
dence against his father, who was accused of
making disturbances in the streets. Said the
oath to him: "Come, my wee mon, speak
the truth, and let us know all 'ye ken about
this affair." "Weel, sir," said the lad, "d'ye
ken Inverness street?" "I do, laddie," replied
his worship. "Weel, we gang along it and turn
into the square, and cross the square—"

"Yes, yes," said the bailie, encouragingly.

"An' when ye gang across the square ye turn
to the right, and up into High street, and keep
on up High street till ye come to a pump."
"Quite right, my lad; proceed," said his wor-
ship; "I know the old pump well." "Well,"
said the boy, with the most infantile simplici-
ty, "ye may gang an pump it, for ye'll no
pump me."—*Register.*

AS SHE IS SPOKE.

"Now, James," said the school-teacher, "re-
member that the secret of good reading is to
read exactly as you would talk. Stand up
straight and try to read your lesson just as you
would speak it."

James dutifully arose. The first sentence in
his lesson was: "William, please to let me
take your kite a few minutes?"

James looked at it thoughtfully and then
exclaimed:

"Hi, dere, Bill, gimme dat kite o' yours a
minute or I'll break your face! See?"

And then he added before the astonished
teacher had time to interrupt, "Dat's de way
I talk it."

James' teacher has decided that some new
principles of instruction are needed in her
school.—*Buffalo Express.*

INDISPUTABLE EVIDENCE.

A young woman was trading in a stationer's
shop, and the elderly proprietor suddenly
asked:

"And when does the wedding take place?"

"The wedding? Why, you don't think—"
the fair customer blushed and hesitated.

"Ah, fraulein, when young ladies buy 100
sheets of paper and only 25 envelopes, I know
there is something in the wind."—*Cologne
Gazette.*

WHY NOT?

A famous Brooklyn clergyman was once ad-
dressing a Sunday-school on the lesson of the
day, which happened to be "Jacob's Ladder."
He got along swimmingly until a little urchin
in one of the back seats squeaked out: "Why
did the angels have to have a ladder when
they had wings?" After the inevitable laugh
had subsided, the clergyman said: "Well, that
is a fair question, who can answer it?" There
was a pause, and then up went a pudgy fist.
"Well, my little man," asked the clergyman,
"why was it?" "I guess mebbe they was a
moultn," was the reply, and the address was
concluded right there.—*Housekeeper.*

AN ACCIDENT.

"I understand," remarked the polite report-
er to the close-mouthed manager of a western
railroad noted for its poor time, "that there
was an accident on your road last night."
"Oh, do you?" was the reply. "Yes, sir." "Do
you know anything about it?" "Only that it
happened to the train that was due here at
3:15." "That train came in promptly on time,
sir," said the manager firmly. "Are you sure
of that?" "Of course I am." "Thanks. That
must have been the accident referred to," and
the reporter dodged out safely.—*Detroit Free
Press.*

A VICTIM OF HOUSE CLEANING.

Missionary—"Was it liquor that brought you
to this?"
Imprisoned burglar—"No, sir; it was house
cleanin'—spring house cleanin', sir."
Missionary—"Eh? House cleaning?"
Burglar—"Yes, sir. The woman had been
house cleanin', an' the stair carpet was up, an'
the folks heard me."—*New York Weekly.*

TRUE POLITENESS.

First lady—"I saw your husband meet you
on Fulton street yesterday, and I noticed that
he removed his hat while speaking with you.
I admired him for it. Very few men do that."
Second lady—"I remember; I told him in the
morning to have his hair cut, and he was
showing me that he had obeyed."—*Smith &
Gray's Monthly.*

NOT ON THE BENCH.

"You say this man has been drinking," said
his honor. "Drinking what?" "Whisky, I
suppose," answered Officer McGobbe. "You
suppose? Don't you know? Aren't you a
judge?" "No, yer anner; only a policeman."
His honor looked carefully at his minion a
moment and then called the next case.

TRUE LOVE.

She—"When papa dies I shall be worth fifty
thousand dollars."
He—"And I am poor."
She—"But my wealth need not be a barrier
between us."
He—"My darling, it shan't!"

CAUSE FOR CONDOLENCE.

Mrs. Plainfield (proudly)—"And who would
have thought that I should ever be the mother
of a poet?"
Her neighbor (misunderstanding)—"Oh,
well, I wouldn't worry about that! He'll have
better sense when he's older."

THEIR ONLY CHANCE.

Cumso—"It was a wise provision of the fath-
ers of the nation, that the president of the
United States must be a native."
Fangle—"Why?"
Cumso—"Well, it reserved one office for
those born in this country."—*Life.*

LITTLE BITS.

FATHER—"Well, Tommy, how do you think
you will like this little fellow for a brother?"
Tommy (inspecting the new infant some-
what doubtfully)—"Have we got to keep him,
papa, or is he only a sample?"—*Chicago Tri-
bune.*

CHAUNCEY DEPEW has been talking about
the negro question, and says that the colored
man has no chance in the North. Mr. Depew
probably forgot that on the sleeping-cars he
operates the colored man is given every possi-
ble chance to blackmail passengers out of a
salary which ought to be paid by the com-
pany.

HOME STUDY. A thorough and practical
given by Mail, at Student's Home, by
an old reliable school. No experiment.
7 Years' Success. Low rates and perfect satisfac-
tion. All ages and both sexes taught. It will pay
to investigate. Write for Catalogue and free trial lesson.
Bryant & Stratton, 449 Main St., Buffalo, N. Y.

THE HIGH SPEED FAMILY KNITTER
Will knit a stocking heel and
toe in ten minutes. Will knit
everything required in the
household from homespun or
factory, wool or cotton yarns.
The most practical knitter on the
market. A child can operate it.
Strong, Durable, Simple, Rapid.
Satisfaction guaranteed or no pay.
Agents wanted. For particulars
and sample work, address,
J. E. GEARHART, Clearfield, Pa.

\$525 Agent's profits per month. Will prove
it or pay forfeit. New articles just
out. A \$1.50 sample and terms free. Try
us. Chidester & Son, 28 Bond St., N. Y.

ARE YOU MUSICAL?
We will send you FREE, five complete pieces of
music—full size—upon receipt of five names and ad-
dresses of families using pianos. Address,
WOODWARD'S MUSICAL MONTHLY,
842 Broadway, New York.

LADIES WHO WILL DO WRITING

The tremendous sale of my preparation,
Gloria Water, has so increased my
correspondence that I will guarantee good wages to ladies who will do writing for me at home. Address
in own handwriting **MISS EDNA L. SMYTHE, Box 1101, South Bend, Ind.** Mention paper.

WILL MAKE GOOD WAGES.

FREE For 30 Days. Wishing to introduce our CRAYON PORTRAITS and at the same time
extend our business and make new customers, we have decided to make this Special Offer:
Send us a Cabinet Picture, Photograph, Tintype, Ambrotype or Daguerrotype of yourself
or any member of your family, living or dead and we will make you a CRAYON POR-
TRAIT FREE OF CHARGE, provided you exhibit it to your friends as a sample of our
work, and use your influence in securing future orders. Place name and address on
back of picture and it will be returned in perfect order. We make any change in picture
you wish, not interfering with the likeness. Refer to any bank in Chicago. Address all
mail to **THE CRESCENT CRAYON CO.** Opposite New German Theatre, CHICAGO, ILL. P. S.—We will forfeit
\$100 to anyone sending us photo and not receiving crayon picture FREE as per this offer. This offer is bonafide.
When you write, mention this paper.

500 SCRAP PICTURES, AUTO. VESSES & RIDDLES FREE

CAMPAIGN BADGE, gold plated, Card Agt's Outfit
Presented to Present Agt. Tuttle P. Co., No. Haven, Ct

YOUR NAME ON 50 SILK FRINGE, Envelope, Gold Bevel, Fancy Shape and Ac-
quaintance Cards (all new), 1 Album, 100 Cards, 100 Tracts, 100
Tricks, etc., all for only 10 cents. CROWN CARD CO., CHICAGO, ILL.

YOUR NAME ON 25 ENAMELED ELITE CARDS (new)
20 Imported Ornaments, 12 PENS, 1 Chain, 1 Lace Pin,
1 Ring, with our popular STORY PAPER 3 months free.
Samples 2c. LAUREL CARD CO., Clintonville, Conn.

YOUR NAME ON 25 LATEST STYLE CARDS
1 Auto. Album, 375 Albums, 1 Ring, 1 Pocket Pencil, 1 Fountain Pen, 1 In-
stantaneous, 1 Story Paper 3 months free, and
Agent's New Samples, all 10c. CLINTON & CO., North Haven, Conn.

YOUR NAME Printed on
25 Silk Fringed, Floral Cards.
20 Imported Ornaments, 12 PENS, 1 Chain, 1 Lace Pin,
1 Ring, with our popular STORY PAPER 3 months free.
Samples 2c. LAUREL CARD CO., Clintonville, Conn.

CARDS
525 New Samples of Silk Ribbon, Silk Fringe, Envelope & New Ro-
cette Cards, Tracts, Songs, Games, etc., 1 Album, 1 Pack Escort, 1
Pack Acquaintance Cards, all for 2c. Crown Card Co., Ohio, Ohio.

Ohio Electric Co., Cleveland, want agents. Cat. free.

RUBBER STAMPS. Best made. Immense Catalogue Free
to agents. The G. A. HARPER Mfg. Co., Cleveland, O.

WATCH FREE—If you want one send a stamp to the
National Illus. Magazine, Washington, D. C.

Sheet Music at one half retail price. Catalog free.
D. H. CAUGHLIN, Toledo, Ohio.

6th and 7th Books of Moses, Albus Magnus,
Long Lost Friend, Mineral Rods and Dip
Needles. B. G. Stauffer, Bachmanville, Pa.

QUIT AR self-taught without notes; 24 charts 50c
BANJO without notes (80 pp., 100 pieces) \$1.
Cir. & cat. of inst's free. E. C. HOWE, 85 Fifth av., Chicago

CUT IN TWO Prices of Sewing Machines. Safes, Scales,
Blacksmith's Tools, Road Cars, Bureaus,
Harness and 1000 other things. List Free.
CHICAGO SCALE CO., CHICAGO, ILL.

AGENT made \$71 in four days selling my Electric Cor-
sets and Specialties. 100 PER CENT. profit and
Cash Prizes. Sample free. Dr. Bridgman, B'way, New York.

BICYCLE TO BOYS AND GIRLS UNDER 18
YEARS OF AGE ON EASY CONDITIONS
WITHOUT ONE CENT DOWN.
Western Post Co., 334 Dearborn St., Chicago, Ill.

WANTED—Women to take crochet work to do at home.
City or country. Steady work. Particulars on appli-
cation. L. WHITE & CO., 209 State St., Chicago, Ill.

BEST PAYING THING for Agents is our PHOTO-
GRAPH FAMILY RECORD PICTURE.
We give you liberal terms. Address Dept. W
C. P. CORY & CO., 41 to 45 Jefferson St., Chicago.

ALL GOODS ON TRIAL
ON EASY CONDITIONS.
CATALOGUES FREE. Write at once
to HOLLY WATCH CO., Jersey City, N. J.

AGENTS WANTED ON SALARY
or COMMISSION, to handle the New
Patent Chemical Ink Erasing Pencil. Agents making
\$50 per week. Monroe Eraser Mfg. Co., x9S, LaCrosse, Wis.

CUT THIS OUT and send with your name and express
office address and we will send you free
to examine and wear, a SOLID GOLD finished watch that you can sell for
Ten Dollars. If it suits, you send us Four Dollars and express charges;
if not, return it to me. Mention whether Ladies' or Gent's size is desired.
W. S. SIMPSON, 37 College Place, N. Y.

NOVELTIES AGENTS
Convertible Wire Baskets, Handy Button, Self-
threading Needle & many others. Catalog sent free
V. Cassgreen Mfg. Co., 134 Van Buren St., Chicago, Illinois

"COLUMBUS MEMORIAL" 400 years
progress.
Grand Panorama World's Fair Buildings. A bonanza
for agents. Retail price 50 cts. Sample by mail 35 cts.
JOHN W. LILIFF & CO., 106 Wabash Ave., Chicago.

SALESMEN SALARY OR COMMISS-
SION TO HANDLE GREATEST NOVELTY
PATENTED EXCLUSIVE TERRITORY;
SELLS AT SIGHT PARTICULARS FREE. SAMPLE 50 cts. Address
UNITY DOOR CHECK CO., Dept. 65 UNITY BLDG., CHICAGO, ILL.

AGENTS Coin Money selling
Beveridge's Automatic
Cooker. Every woman
buys. Best and cheapest
cooker sold. Big Profits to good workers, male or
female. Sample's weight 12 oz. Adv'g matter furnished
For circulars address W. E. BEVERIDGE, Baltimore, Md.

A BIG OFFER 50c. MADE IN A
MINUTE! If you
will hang up in this
P. O., or some public
place, the two show
bills that we send, we will give you a 50c. cert., and send it in
advance with samples and bills. This will trouble you about
one minute, and then if you want to work on salary at \$50
or \$100 per month, let us know. We pay in advance.
GIANT OXIE CO., 21 Willow St., Augusta, Me.

MANAGER and OVERSEER
To hire and oversee
man and represent
a manufacturing Co. who want branch offices. We pay
office rent, advertising and traveling expenses. Position
permanent, good salary, no peddling, no canvassing.
Experience not necessary as you act under our instruc-
tions. You must be known in your location and furnish
references if required. Address with stamp,
The Brandenburg Mfg. Co., 406 W. Third Street, Dayton, Ohio.

BICYCLES GIVEN AWAY
For a few hours active labor. Send 25c.
for "The Modern Queen," 16 pages, 64
column Illus. Magazine, 6 mos. on
trial and full particulars. Modern
Queen Co., 106 Center St., New Haven, Ct.

LOOK HERE!
Do you use lamps? Our patent attachment im-
proves the light, avoids dirty work in filling, saves
time and money. You need it. All housekeepers
need it. Samples free; and Gold Watch
Experience not necessary as you act under our instruc-
tions. Agents wanted. Good pay, steady work, 3 months
subscription to Monthly Journal for 2c. stamp.
J. BRIDE & CO., Nassau St., New York, N. Y.

\$30 to \$50
A
WEEK
I WANT an honest, earnest
man or woman in every coun-
ty to take the sole agency
for an article that is needed
in every home and indis-
pensable in every office.
SELLS AT SIGHT, in
town or country. You can
make \$200 in three
months, introducing it, after which it will bring
you a steady income. Splendid opening for the
right person. Don't lose a moment. Good jobs
are scarce and soon taken. Write at once to
J. W. JONES, Manager, Springfield, Ohio.

\$7.50 FOR A DAYS' WORK.

GOOD PAY! STEADY WORK IF
DESIRED. Address
JAMES LEE & CO., 215 Dearborn St., Chicago, Ill.

A PRESENT.

* SEND us your address and we will make you a
* present of the best Automatic WASHING
* MACHINE in the World. No wash-board or rub-
* bing needed. We want you to show it to your friends.
* or act as agent if you can. You can COIN MONEY.
* We also give a HANDSOME WATCH to the
* first from each county. Write quick. Address
* N. Y. LAUNDRY WORKS, 80 Murray Street, N. Y.

WE WANT YOU

To act as our agent. We will treat you well and pay
liberally for your services. The work is easy, pleasant
and adapted to both young and old of either sex.
GEO. STINSON & CO., Box 1544, Portland, Me.

Campaign Badges.
Gold plate and finely fin-
ished with correct pictures
of the candidates for Presi-
dent and Vice President of
all parties. Over 600,000
badges sold in 1888. There
can be 15,000,000 sold in 1892.
You can sell your share of
them, by being the first in
your place to have them for
sale. Sample 10 cents, 3 for
25 cents. 1 dozen 50 cents.
Post paid. 1 Gross by Ex-
press \$3.25. Address
HOWARD MFG. CO., Providence, R. I.
Mention this paper when you write.

MISS BEACH'S
Curling Fluid.
Keeps the hair in curl for days
innocent as a dove. A toilet
necessity. Not sent on trial.
30,000 Ladies Have Endorsed It.
At druggists, or prepaid, 50c.
LADY AGENTS wanted.
DENISON CHEMICAL CO.,
56 (G) LaSalle St., Chicago, Ill.
Mention this paper when you write.

PARKER'S
HAIR BALM
Cleanses and beautifies the hair.
Promotes a luxuriant growth.
Never Fails to Restore Gray
Hair to its Youthful Color.
Cures scalp diseases & hair falling.
50c. and \$1.00 at Druggists.

ARE YOU CONSUMPTIVE
Use Parker's Ginger Tonic. It cures the worst Cough,
Weak Lungs, Debility, Indigestion, Pain, Take in time 50 cts.

FOR A 2¢ STAMP
WE WILL SEND
FREE TO ANY ADDRESS A TRIAL BOX OF
NO PAIN! A-CORN SALVE!
REMOVES THE TOE CORN EVERY TIME
GIANT CHEMICAL CO., PHILA., PA.

FREE Trial of Dr. Judd's
Electric Belts and Bat-
teries Combined. Sent
to anyone on trial free.
Costs nothing to try them. Will cure you. Give
size. Agents wanted. DR. JUDD, Detroit, Mich.

PARTIAL DEAFNESS. The SOUND
anted to help a larger per cent. of cases than all similar
devices combined. The same to the Ears as glasses are
to the Eyes. Positively invisible. Worn months
without removal. H. S. WALES, BRIDGEPORT, CONN.

Fat People You can reduce your weight
10 to 15 lbs. a month at home
without starving or injury by
Dr. Clarke's Home Treatment. Proofs, Testi-
monials Free. F. B. Clarke, M. D., Drawer 133, Chicago, Ill.

YOUR Troubles you, if you are an Old or
BLADDER Middle Aged Man. Complete list of
symptoms furnished on application. Also
the best method of cure. Inclose stamp
to W. H. Barsby, Marshall, Mich.

FAT FOLKS Reduced 15 lbs. a month. Any one
can make remedy. Safe and sure.
Particulars 2c. P. O. Box 404, St. Louis, Mo.

OPIUM Morphine Habit Cured in 10
to 20 days. No pay till cured.
Dr. J. Stephens, Lebanon, O.

RUPTURE Positive Cure. By mail. Send
for circular. Address Capt. W. A.
Collings, Smithville, Jefferson Co., NY

CANCER AND TUMORS scientifically
treated and cured. No knife.
Book Free. Drs. GRACIUS & NORRIS
163 Elm Street, Cincinnati, Ohio.

VARICOCELE We will send
you the
MARVELOUS
French rem-
edy CATHOS free. It is an absolute and perma-
nent cure. Use it and pay if satisfied. Address
Von Mohl Co., Sole Agents, Cincinnati, O.

PILES Remedy Free. INSTANT RELIEF. Final
cure in 10 days. Never returns; no purge;
no salve; no suppository. A victim tried
in vain every remedy has discovered a
simple cure, which he will mail free to his fellow suf-
ferers. Address J. H. REEVES, Box 8290, New York City, N. Y.

DEAFNESS & HEAD NOISES CURED
By Purely Inevitable Tinnitus Ear Cures. Whispers
heard. Successful when all remedies fail. Sufferers
only by F. H. HISCOX, 553 B'way, N. Y. Write for book of proofs FREE

If afflicted with
sore eyes use **Dr. Thompson's Eye-Water**

RUPTURE Positive Cure. By mail. Sealed
Book Free. Address Dr. W. S.
Rice, Box F, Smithville, N. Y.
A SURE and permanent cure for Epilepsy. Fits, in 24
Hours. Free to poor. A. A. Ferdinand, St. Louis, Mo.

Recent Publications.

EXPERIMENT STATION BULLETINS AND GOVERNMENT PUBLICATIONS.

Sent free, on application, to residents of the state in which the station is located. Address Agricultural Experiment Station.

COLORADO.—(Fort Collins) Bulletin No. 19, May, 1892. Observations upon injurious insects in 1891.

ILLINOIS.—(Champaign) Bulletin No. 20, April, 1892. Field experiments with corn in 1891. Bulletin No. 21, May, 1892. General report on horticulture. Corn, crossing, sweet corn. The late season and the corn crop.

KANSAS.—(Manhattan) Bulletin No. 31, December, 1891. Sugar-beets. Bulletin No. 32, December, 1891. Chemical composition of feeding stuffs, and of certain plants during development. Japanese beans. Plaster and castor-oil used as fertilizers.

LOUISIANA.—(Baton Rouge) Bulletin No. 15. Report of veterinarian for 1891. Bulletin No. 16. Report of North Louisiana station for 1891.

MAINE.—(Orono) Annual report, for 1891, parts 2 and 3.

MARYLAND.—(College Park) Bulletin No. 14, September, 1891. Wheat. Bulletin No. 15, December, 1891. Experiment vineyard Annual report, for 1891.

MASSACHUSETTS.—(Hatch Station, Amherst) Bulletin No. 18, April, 1892. Fertilizers for potatoes, oats and corn. Comparison of corn and millet as grain crops. Proximate composition of potatoes as affected by fertilizers. Miscellaneous crops. Bulletin No. 19, May, 1892. Report on insects.

MISSOURI.—(Columbia) Bulletin No. 17, January, 1892. Sugar-beets.

NEVADA.—(Reno) Bulletin No. 16, April, 1892. The creamery industry.

NEW JERSEY.—(New Brunswick) Annual report, for 1891.

NEW YORK.—(State Station, Geneva) Bulletin No. 40, March, 1892. Black-knot of plum and cherry. Bulletin No. 41, April, 1892. Influence of copper compounds in soils upon vegetation. Spraying with fungicides for potato-blight. Analyses of materials used in spraying plants.

OREGON.—(Corvallis) Bulletin No. 19, May, 1892. Some Oregon weeds, and how to destroy them.

SOUTH DAKOTA.—(Brookings) Bulletin No. 29, December, 1891. Forestry and fungi.

TEXAS.—(College Station) Bulletin No. 20, March, 1892. Chemical study of grasses, forage plants and Texas grains.

UTAH.—(Logan) Bulletin No. 13, May, 1892. Feeding hay and grain mixed to horses. Feeding cut feed versus whole hay to horses. Bulletin No. 14. Horticulture and entomology.

WEST VIRGINIA.—(Morgantown) Bulletin No. 22, February, 1892. Your weeds and your neighbors. Distribution of weeds, bad points of weeds, weeds as fodder for stock, chemical weed exterminators.

WISCONSIN.—(Madison) Bulletin No. 31, April, 1892. Notes on the use of the Babcock Test and the Lactometer.

WYOMING.—(Laramie) Bulletin No. 6, May, 1892. Soils of the agricultural experiment farms.

UNITED STATES DEPARTMENT OF AGRICULTURE.—(Washington, D. C.) Farmers' bulletin No. 8. Results of experiments with inoculation for the prevention of hog-cholera. *Division of Vegetable Pathology*—Bulletin No. 1. Additional evidence on the communicability of Peach Yellows and Peach Rosette. *Division of Statistics*—Report No. 4, miscellaneous series. Wages of farm labor in the United States. Report No. 95, new series. Condition of winter grain and progress of cotton planting. Statistics of sheep and wool production since 1870. *Division of Entomology*—Bulletin No. 27. Reports on the damage by destructive locusts during 1891.

CATALOGUES RECEIVED.

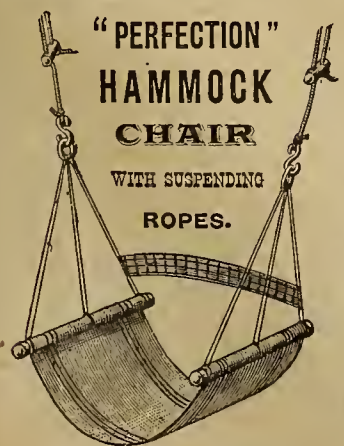
Circulars regarding the "Black Leaf" sheep-dip, from Louisville Spirit-Cured Tobacco Co., Louisville, Ky.

Gowanda Agricultural Works Co., Gowanda, N. Y., founders and machinists, makers of a general line of agricultural tools.

Catalogue of Collie dogs. N. Atlee Burpee & Co., Philadelphia, Pa.

Kraussdale Foundry and Machine Shop, makers of all kinds of agricultural implements. Kraussdale, Lehigh county, Pa.

F. C. Austin Mfg. Co., Chicago, Ill. Feed cookers, feed mills, feed cutters, steam generators, etc.



"PERFECTION" HAMMOCK CHAIR WITH SUSPENDING ROPES.

Premium No. 541.

a premium for 3 subscribers to either the Ladies Home Companion or Farm and Fireside at 50 cents each.

Price, including one year's subscription to either paper, \$1.

We offer it for sale for only 75 cents. Postage or express paid by us in each case. Give your express station if different from your post-office address.

FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

SHORT HOME-FREE. Only one student in each town given this privilege. WRITE NEW RAPID College of SHORTHAND BUFFALO, N.Y. Send stamp for full particulars.

PATENTS LEHMANN, PATTON & NESBIT, Washington, D. C. Examinations Free. Send for circular.

PRINTING OUTFIT 15¢ COMPLETE. 4 alphabets rubber type, type holder, bottle ink, ink pad and T-wipers. Put up in neat box with directions for use. Satisfaction guaranteed. Worth 50c. Best Linen Marker, Card Printer, etc. Sets names in 1 minute, prints 500 cards an hour. Sent postpaid 15c; 2 for 25c. Cat. free. R. H. INGERSOLL & BRO. 65 Cortlandt St. N.Y. City.

THIS MACHINE \$12 You can give this elegant machine a thorough test before sending us one cent. TRIAL FREE. All attachments free. Every machine warranted 5 years. For catalog, full particulars, etc., cut this adv. out and send to us to-day. ALVAH MANUFACTURING CO., Chicago, Ill.

PRICE \$180 We sell DIRECT TO FAMILIES PIANOS ORGANS \$150 to \$1500 \$85 to \$500. Absolutely Perfect! Sent for trial in your own home before you buy. Local Agents must sell inferior instruments or charge double what we ask. Catalogue free. MARCHAL & SMITH PIANO CO., 235 East 21st St., N.Y.

You need work.

(If not this adv. does not interest you)

You can make \$75 to \$250 a month, provided you work with a little vim, vigor, pluck and push.

We have got something new. It costs nothing to investigate. Must have a live, wide-awake representative in your community, either man or woman at once. All information cheerfully sent by return mail. Better write to-day. Address in full,

THE STANDARD SILVERWARE CO., ORDER DEPT. 501 BOSTON, MASS.

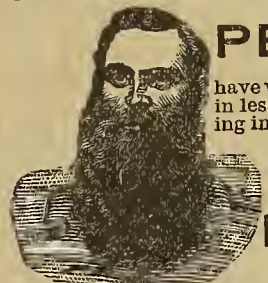
If afflicted with sore eyes use Dr. Thompson's Eye-Water

FOR SUMMER COMPLAINTS PERRY DAVIS' PAIN-KILLER BEST MEDICINE IN THE WORLD.

TOKOLOGY, a complete Ladies' Guide in health and disease. Lizzie N. Armstrong writes: "If I knew I was to be the mother of innumerable children it would have no terrors for me, so great is my confidence in the science of TOKOLOGY." Prepaid, \$2.75. Sample pages free. Best terms to agents.

Alice B. Stockham & Co., 277 Madison St., Chicago. Mention this paper when you write.

HALF A MILLION PEOPLE



have written to Dr. A. Owen in less than two years, seeking information about

THE OWEN ELECTRIC BELTS AND APPLIANCES.

THOUSANDS HAVE BEEN CURED by them when all other means had failed.

OUR ILLUSTRATED CATALOGUE contains fullest information, list of diseases, cuts of belts and appliances, prices, sworn testimonials and portraits of people who have been cured, etc. Published in English, German, Swedish and Norwegian languages. This valuable catalogue or a treatise on rupture cured with Electric Truss will be sent to any address on receipt of six cents postage.

The Owen Electric Belt & Appliance Company,

MAIN OFFICE AND ONLY FACTORY, THE OWEN ELECTRIC BELT BUILDING,

201-211 State Street, corner Adams, CHICAGO, ILL.

New York Office, 826 Broadway.

THE LARGEST ELECTRIC BELT ESTABLISHMENT IN THE WORLD.

MENTION THIS PAPER.



LOVELY FACES, WHITE HANDS.

Nothing will WHITEN and CLEAR the skin so quickly as

Derma-Royale

The new discovery for dissolving and removing discolorations from the cuticle, and bleaching and brightening the complexion. In experimenting in the laundry with a new bleach for fine fabrics it was discovered that all spots, freckles, tan, and other discolorations were quickly removed from the hands and arms without the slightest injury to the skin. The discovery was submitted to experienced Dermatologists and Physicians who prepared for us the formula of the marvelous Derma-Royale. THERE NEVER WAS ANYTHING LIKE IT. It is perfectly harmless and so simple a child can use it. Apply at night—the improvement apparent after a single application will surprise and delight you. It quickly dissolves and removes the worst forms of moth-patches, brown or liver spots, freckles, blackheads, blotches, sallowness, redness, tan and every discoloration of the cuticle. One bottle completely removes and cures the most aggravated case and thoroughly clears, whitens and beautifies the complexion. It has never failed—it CANNOT FAIL. It is highly recommended by Physicians and its sure results warrant us in offering

\$500 REWARD. To assure the public of its merits we agree to forfeit Five Hundred Dollars cash, for any case of moth-patches, brown spots, liver spots, blackheads, ugly or muddy skin, unnatural redness, freckles, tan or any other cutaneous discolorations, (excepting birthmarks, scars, and those of a scrofulous or kindred nature) that Derma-Royale will not quickly remove and cure. We also agree to forfeit Five Hundred Dollars to any person whose skin can be injured in the slightest possible manner, or to anyone whose complexion (no matter in how bad condition it may be), will not be cleared, whitened, improved and beautified by the use of Derma-Royale.

Put up in elegant style in large eight-ounce bottles.

Price, \$1.00. EVERY BOTTLE GUARANTEED.

Derma-Royale sent to any address, safely packed and securely sealed from observation, safe delivery guaranteed, on receipt of price, \$1.00 per bottle.

Send money by registered letter or money order with your full post-office address written plainly; be sure to give your County, and mention this paper.

Correspondence sacredly private. Postage stamps received the same as cash.

AGENTS WANTED Send for Terms on Sight \$10 A DAY.

Address THE DERMA-ROYALE COMPANY, Corner Baker and Vinc Streets, CINCINNATI OHIO.

Subscribers everywhere are taking advantage of our Grand Offer of a Fifteen Dollar Picture and Gold Frame for only \$1.50, and

TREMENDOUS ENTHUSIASM

Greets the Marvelous Picture wherever it is shown. Although it is only a few days since our offer was first made, the orders are coming thick and fast, and Agents are already reporting WONDERFUL SUCCESS IN SELLING THE PICTURE, with big profits for themselves. Many of these Agents will easily

MAKE HUNDREDS OF DOLLARS THIS SUMMER,

As is shown by the letters below. The offer is open to everyone, and you miss the opportunity of a lifetime if you fail to accept at once. Remember,

A Fifteen Dollar Picture and Gold Frame Only \$1.50

Will be sent to the first reliable person applying from each locality, for

Size of Picture, 20 by 28 inches. Size of Frame, 31 by 40 inches, made of molding 6 inches wide.

READ WHAT AGENTS SAY:

Over Fifty Dollars Profit in One Day.

MANCHESTER, VA., July 5, 1892.

Two of us, working from 6 to 8 hours, have taken 52 orders for framed pictures. I think this is good, and am going to devote my whole time to it.

N. B. JOHNSON.

A Profitable Day's Work.

RIFORD, PA., June 30, 1892.

I received the outfit, and enclose an express order for one dozen pictures. Send more order books as soon as possible. The picture is taking.

WM. F. PUTNAM.

10 Orders the First Day.

BLOOMINGTON, ILL., July 5, 1892.

I received the outfit Friday and was surprised at its beauty. On Saturday I took orders for 10. You will hear from me again soon.

G. D. PERKINS.

The Next Day Mr. Perkins Writes:

BLOOMINGTON, ILL., July 6, 1892.

I enclose draft, for which send me two dozen pictures. I wish you to send me more blank orders. I used those sent, and am obliged to take orders without. The picture is taking. G. D. PERKINS. P. S.—Send blank orders at once.

Says the Frame Alone is Worth Five Dollars.

WATERTOWN, WIS., July 1, 1892.

I received the beautiful picture and frame, and am more than pleased with it. Its richness of color and execution are elegant. The frame alone is worth \$5.00.

FRANK J. WIESE.

11 Orders the First Day.

RUSSELLVILLE, ARK., July 1, 1892.

Picture ordered at hand all right. It is simply superb in its grand and striking appearance. Have canvassed one day and taken eleven orders.

W. D. LUCY.

Says the People will Run After Him to Get the Picture.

MANCHESTER, VT., July 4, 1892.

I received the picture, and it is away ahead of anything I expected, and I am very much pleased with it. I want one dozen to place in different stores where everybody will see them. I will have them running after me in less than a week.

W. H. GRAHAM.

Starts With 15 Orders, and All say They are Beauties.

NORTHUMBERLAND, PA., July 2, 1892.

I am much pleased with the pictures and frames. They are beauties, and all who see them say the same. * * * Send me more order books as I have orders for 15 pictures already.

A. ARTER.

COUPON Entitling the sender to the Grand Fifteen Dollar Picture and Gilt Frame, and this paper one year, for Only \$1.50.

MAST, CROWELL & KIRKPATRICK, Publishers, Springfield, Ohio.

For \$1.50 inclosed, please send me the Picture, "Columbus at the Royal Court of Spain," in the large Gilt Frame, made of 6-inch molding, and measuring 31 by 40 inches. Also send Farm and Fireside one year without extra charge. In return for my receiving the picture and frame and Farm and Fireside one year at this low Special Price, I agree to show them to my friends and neighbors, to whom I will endeavor to make sales at the regular price.

Name.....

Post-Office.....

County..... State.....

Write Nearest Express Station here.....

Also send Farm and Fireside one year free, to my address as above.

If you are already a subscriber to Farm and Fireside, when you accept this offer one year will be added to your present subscription.

Cut out, fill up and return to us the above coupon, with \$1.50, and you will receive the complete Picture and Frame, and also this journal one year.

If you are already a subscriber, one year will be added to your present subscription. Only one picture will be sold to one person on these terms, and that to the first applicant from a community.

AGENTS ARE MAKING FIVE TO FIFTEEN DOLLARS A DAY and are also offered a Free Trip to the World's Fair. Write for particulars and terms to Agents.

Address FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio,

\$50 Down Buys a Farm-In Crop!

If you want an 80-acre farm in a good neighborhood; near railroads; good buildings and fences and now in crop, send to-day for my lists. 80, 160, 320-acres at prices from \$2.50 to \$20.00 per acre!

As my terms are ten years time and only

One-Tenth in Cash

any live farmer can make his crops "pay him out." This is better than raw land at any price. Pays an income from the beginning.

OTIS A. TURNER,

Room 5, New England Bldg, Kansas City, Mo.

BICYCLES ON EASY PAYMENTS. No extra charge. All makes new or 2d hand. Lowest prices guaranteed. Largest stock and oldest dealers in U. S. Catalogue free. Agents wanted. **Rouse, Hazard & Co., 32 E St., Peoria, Ill.**

STUMP BLASTING CARTRIDGES, Caps, Fuse, Mfrs. prices to introduce. Catalogue free. **AXAX DYNAMITE WORKS, Bay City, Mich.**

FRUIT EVAPORATOR THE ZIMMERMAN. Different sizes and prices. Illustrated Catalogue free. **THE BLYMYER IRON WORKS CO., Cincinnati, O.**

MY WIFE SAYS SHE CANNOT SEE HOW YOU DO IT FOR THE MONEY. \$12 Buys a \$65.00 Improved Oxford SINGER Sewing Machine; perfect working, reliable, finely finished, adapted to light and heavy work, with a complete set of the latest improved attachments FREE. Each machine is guaranteed for 5 years. Buy direct from our factory, and save dealers and agents profit. Send for FREE CATALOGUE. Mention paper. **OXFORD MFG. CO., Dept. 24, CHICAGO, ILL.**

ERTEL'S VICTOR SHIPPED ANYWHERE TO OPERATE ON TRAILS AGAINST ALL OTHER PRESSES. **HAY PRESS** PURCHASER TO KEEP ONE DOING MOST AND BEST WORK. **GEO. ERTEL & CO. QUINCY, ILL.**

Before you buy a Press, write the **HYDRAULIC PRESS MFG. CO. of Mt. Gilead, O.** for catalogue, which will be mailed free on application. **HYDRAULIC** Presses for all purposes; also general cider makers' supplies.

BEST FARM FENCE, made of GALVANIZED STEEL WIRE. FENCES and GATES for all purposes. Write for free catalogue giving particulars and prices. Address: **THE SEDGWICK BROS. CO., RICHMOND, IND.** Be sure to mention Farm and Fireside.

WELL DRILLING MACHINERY, MANUFACTURED BY **WILLIAMS BROTHERS, ITHACA, N. Y.** Successors to the Empire Well Auger Co. Mounted and on Sills, for deep or shallow wells, with steam or horse power. Send for Catalogue. ADDRESS: Williams Brothers ITHACA, N. Y.

IDEAL In Name and In Fact. **Steel WIND MILL** and Three Post **STEEL TOWER.** The LATEST and BEST. Sizes 8-9-12 ft. Geared. TOWERS, 30, 40, 50 & 60-ft. Mills with or without graphito bearings. **STOVER MFG. CO., 607 River St., FREEPORT, ILL.**

FOR BEST HAY PRESSES [STEEL PRESSES] SELF FEEDER ADDRESS **P. K. DEDERICK & CO. 10 DEDERICK'S WORKS, ALBANY, N.Y.**

Milk PRESERVATIVE. Milkmen, Creamerymen and Dairy-men can keep Milk and Cream fresh a week without using ice. Healthful, tasteful, odorless and inexpensive. SAMPLE enough to make test, mailed for ten cents. The Preservative Mfg Co., 10 Cedar St., New York.

THE MILLER CARRIAGE AND HARNESS CO.



Are now ready to supply the wants of the consumer with Carriages and Harness of every description, at prices that defy competition. We are the leaders. Let those who can follow. Our manufactures are made to give perfect satisfaction and the "Miller" guarantee stands good all over the country. Finish, Workmanship, Strength and Beauty combine the "Miller" work. Send for our illustrated Catalogue and Price List giving you full particulars and ideas of our manufacture, to

THE MILLER CARRIAGE & HARNESS CO.,
27 West 4th Street, Cincinnati, Ohio.
St. Paul Building.



TIME IS MONEY
WHICH YOU CAN SAVE BY USING THE
Queen Washing Machine
One washer sold at wholesale price where we have no agent. For full particulars and catalogue, address **The Buckeye Churn Co., P. O. Box 68, Sidney, Ohio.**

Mention this paper when you write.



THE STANDARD OF THE WORLD
FRANK MILLER'S
FOR HOME AND STABLE USE
HARNESS DRESSING
For Harness, Buggy Tops, Saddles, Fly Nets, Traveling Bags, Military Equipments, Etc. Give a beautiful finish which will not peel or crack off, emut or crack by handling. Not a varnish Used by the U. S. Army and is the standard among manufacturers and owners of fine harness in every quarter of the globe.

SOLD BY ALL HARNESS MAKERS.

Mention this paper when you write.

WHITMAN'S BALING PRESSES. Always Victorious. A FULL LINE. Buy the BEST. Send for Circulars. Warranted Superior to all. See our "NEW DEPARTURE" low price FULL CIRCLE BAILING PRESS. Largest Hay Press Factory in America. **WHITMAN AGRICULT'L CO., St. Louis, Mo.** Mention this paper when you write.



CUTAWAY HARROW CO., SOLE MANUFACTURERS, HIGGANUM, CONN. New York Office, No. 18 Cliff St. **WHITMAN & BARNES MFG. CO.,** GEN'L AGENTS, CINCINNATI AND CHICAGO. Mention this paper when you write.

COLUMBIA STEEL Wind Mill
New in Principle. Beautiful in Appearance. POWERFUL IN OPERATION. Contains COVERED INTERNAL GEAR.



MAST, FOOS & CO., SPRINGFIELD, OHIO.

Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.

FREE Stop right here! Read this add!
We will send it to you for nothing.
Do You Know a Good Thing When You See it?
The Finest Catalogue and Handbook of Musical Instruments ever issued. 28 pages, illustrated in colors with Portraits and Photo-Lithographs, giving full particulars of the celebrated Cornish
PIANOS AND ORGANS
You buy a Piano or Organ direct from our factory at cost price, thus saving from 50 to 100 per cent. DON'T buy elsewhere till you see our Catalogue. When you have examined it YOU WON'T BUY ELSEWHERE. BE WISE IN TIME. Don't fill agents' and dealers' pockets with your hard earned money; get every cent of value for yourself, and buy direct from the manufacturer. Send at once for our Catalogue; it is FREE TO ANY ADDRESS. Write us.
CORSH & CO., (Old Established and Reliable) WASHINGTON, New Jersey.

Always mention this paper.

BUCKEYE Low Down SHOE GRAIN DRILL
Center Gear, Ratchet Ground Wheels, Positive Force Feed for Grain and Grass Seed, Limber Tongue, with no Weight on the Horses' Necks. Frames supported by Wheels both in Front and Rear, practically a Four Wheel Drill. The Ratchet Ground Wheels both being Drivers, the Grain Feed is operated in turning either to the right or left—the latest and best improvement on Grain Drills now in the market. Manufactured by

P. P. MAST & Co., SPRINGFIELD, OHIO. ALSO MANUFACTURERS OF **BUCKEYE FERTILIZER DRILLS, BUCKEYE RIDING & WALKING CULTIVATORS, BUCKEYE SEEDERS, BUCKEYE CIDER MILLS and HAY RAKES.** We also manufacture this same style in a Combined Grain and Fertilizer Drill. **BRANCH HOUSES: Philadelphia, Pa.; Peoria, Ill.; St. Paul, Minn.; Kansas City, Mo.; San Francisco, Cal.** Send for Circular to either of these firms or to us. When you write, be sure to say you saw this advertisement in Farm and Fireside.

HARNESS FROM \$5.00 UPWARDS. This cut shows our \$5.50 Harness which we make a specialty of and DEFY COMPETITION.
CARTS and BUGGIES BARKLEY \$10.00 ROAD CARTS and upwards. For Style and Finish they can not be surpassed. We also manufacture a complete line of **GOAT and DOG HARNESS** from \$1.50 to \$12.50 per set. **GOAT or DOG CARTS** from \$4.00 to \$7.00. Write for GOAT CATALOGUE. We have manufactured and sold to dealers, BUT NOW we are selling direct to consumers, saving you the traveling man's expenses and dealer's profit. Write for illustrated catalogue and prices. 282 & 284 Main St. **FRANK B. BARKLEY MFG. CO., CINCINNATI, O.** Mention Farm and Fireside when answering this advertisement.

THE COST IS THE SAME

The Hartman Steel Picket Fence
Costs no more than an ordinary clumsy wood picket affair that obstructs the view and will rot or fall apart in a short time. The Hartman Fence is artistic in design, protects the grounds without concealing them and is practically everlasting. **ILLUSTRATED CATALOGUE with PRICES and TESTIMONIALS Mailed FREE.** **HARTMAN MFG. CO., BEAVER FALLS, PA.** Eastern Sales Agency, 102 Chambers St., New York; Southern Sales Agency, 51 and 53 S. Forsyth St., Atlanta, Ga. T. D. Ganse, General Western Sales Agent, 308 State Street, Chicago, Illinois. Be sure to mention this paper when you write.

Prem. No. 199.

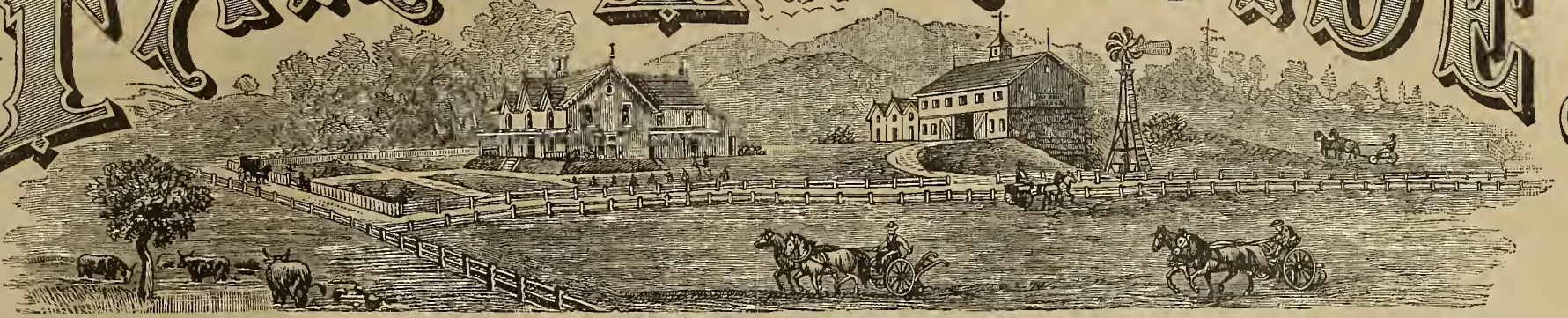
YOUR OWN MILLER.

A Grinding-mill for Family Use.

Adjusted by one thumb-screw in a moment to grind from fine flour to hominy. Adapted for grinding corn, wheat, coffee, spices, or grain of any kind for domestic use or feeding purposes. Corn-meal, hominy and Graham flour produced fresh and pure in your own home. Grinds 1 pound of coffee in 1 minute; 1 pound of flour or meal a longer or shorter time, as the mill is set to grind fine or coarse. The grinding surfaces are made of very hard material, ground perfectly true, and the shaft is of steel. Diameter of fly wheel, 20 inches. Given as a premium for 25 subscribers to either the Farm and Fireside or Ladies Home Companion, at 50 cents each. Price, including one year's subscription to either paper, \$4. We offer it for sale for \$3.75. Carefully crated and shipped by freight, unless otherwise ordered, receiver to pay charges, which will be small.

Address **FARM AND FIRESIDE, Philadelphia, Pa.,** or **Springfield, Ohio.**

FARM AND FIRESIDE.



EASTERN EDITION.

VOL. XV. NO. 21.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, AUGUST 1, 1892.

TERMS { 50 CENTS A YEAR.
24 NUMBERS.

The Circulation of FARM AND FIRESIDE
this issue is

250,400 COPIES.

The Average Circulation for the 24 issues of
the last 12 months has been

273,137 COPIES EACH ISSUE.

To accommodate advertisers, two editions
are printed. The Eastern edition being
100,100 copies, the Western edition
being 150,300 copies this issue.

Farm and Fireside has More Actual
Subscribers than any Agricultural
Journal in the World.

Current Comment.

SMUT in wheat is on the increase. In Ohio it now prevails to such an extent that the yield of wheat is materially reduced. It is time preventives were in general use. If allowed to increase, the loss in yield from smut will soon be serious. Every bushel of seed-wheat carrying the spores of smut should be subjected to simple treatment that will destroy these spores and prevent loss in the future. It may be some bother, but it will pay in dollars and cents. If the wheat-grower will not bother with preparing the seed for his whole crop, there is no excuse for neglecting to prepare at least a part of his seed-wheat, and sow it on clean ground, so that he may have clean seed for future crops.

In response to a special request, Director Thorne, of the Ohio Agricultural Experiment Station, has sent us the following article on "smut in wheat," which we ask papers to republish and give as wide circulation as possible:

"EDITORS FARM AND FIRESIDE:—At this station we have experienced a great increase in the proportion of 'stinking smut' or 'bunt' in wheat during the last three years, and reports from other parts of the state indicate that this increase is not confined to our locality. We have no means of making more than an approximate estimate of the loss to the farmers of the state from this source, but it probably amounts to one per cent or more of the entire crop, or not less than 300,000 bushels annually in Ohio.

"Smut is caused by the growth within the wheat-plant of a parasitic plant, and the grains of smutty dust, which the microscope shows to be as uniform in size and shape as grains of wheat, are the seeds of this parasite. When the smutted wheat grains are crushed, this dust is scattered through the sound wheat and carried to the soil by the seed-wheat, where it germinates and sends its microscopic mycelium threads into and up the plant as it grows, and appropriates the forming ear to its use.

"Farmers have known for many years that smut may be largely prevented by soaking the seed-wheat in a solution of sulphate of copper (blue vitriol). The success of this process evidently depends upon killing the smut seeds (spores) on the seed-grain without injuring the grain. Recently, it has been demonstrated that the same object may be attained by scalding the seed-wheat, this method having first been published by Prof. Jensen, of Denmark.

"Experiments made at the experiment stations of Kansas, Indiana and Ohio have shown that the hot-water treatment is quite as effective as bluestoning, and is at least no more liable to injure the vitality of the seed-wheat. A convenient way of scalding the wheat is to have two vessels, in one of which the water is kept at a temperature of about 128° Fahrenheit, and in the other at about 135°. The grain is put into a loose basket, which is not filled quite full, and is covered to prevent the wheat floating out. The basket is dipped in the first vessel and turned and shaken for two or three minutes, so as to get all the grains warm and wet, and then it is lifted out and dipped into the warmer water and allowed to stay ten or fifteen minutes, with frequent shaking to insure the water reaching every grain. When taken out, the basket should be immediately plunged into cold water, or the con-

and this form, too, seems to be on the increase. Some fields in Ohio were damaged this season to the extent of 20 per cent or more by loose smut, and some of the most promising varieties under cultivation at the experiment station are so subject to it that their dissemination cannot be encouraged. Thus far, no remedy has been discovered for this form of smut."

IN answer to inquiries for information about co-operative dairying, we give the following extracts from "How to Co-operate:"

By the co-operative system the dairy-men organize a corporation on, a co-operative basis, furnish the necessary capital for factory and appliances, and manage the business through a board of directors elected by the stockholders. Thus, any profit in the business is returned to the

corresponding with successful co-operative factories, also the various dealers (not one alone) in factory and creamery supplies, and then call a meeting of the farmers to consider the whole subject. At this first meeting a committee on by-laws should be appointed, also a canvassing committee and perhaps a third committee to ascertain any facts not stated in the meeting. An adjournment should then be taken for two or three weeks, just far enough ahead to give the committees time to do their work and canvass the locality for subscriptions to the capital stock, but not long enough to allow interest in the matter to cool. More will be accomplished by pushing things in short order than by moving too slowly. At the same time care should be taken to make no mistake.

The committee on by-laws should report a scheme of organization that shall be thoroughly legal under the state laws.

At the adjourned meeting, or as early as possible, the association should be legally perfected and a portion or all of the capital stock paid in. Not until this is done should the question of the location of the cheese factory or creamery be decided, because on this point there are often serious differences of opinion which may be carried to the extent of disruption if the co-operators are not sufficiently bounden to hold together until they learn that co-operation means the greatest good to the greatest number, as well as absolute justice to each individual. Many points as to the practical management of the business and conduct of the factory are to be considered in locating it. Accessibility to patrons and to depot, freight, express and telegraph, good water, perfect drainage, good roads, cheap ice, freedom from anything that might contaminate the quality of the butter—all these points must be attended to.

Investigate thoroughly the various systems of creamery management, and adopt the one which seems best and cheapest for your special circumstances. Don't take the estimate of any single outfitter of creameries, but get bids from them all.

The co-operative creamery is practical and sensible, and should be adopted in every neighborhood where dairying is practiced to any extent and there are enough cows to support one. They have been successful in the past, and they will be more so in the future.

Farmers to whom the idea is new will be surprised at the number of co-operative creameries already in successful operation. Out of more than one hundred and fifty creameries in New England alone, eighty per cent are thoroughly co-operative, owned by the farmers, managed by their directors through a superintendent employed under their supervision, and all receipts, setting aside a reserve fund and five or six per cent on capital stock, above expenses declared in dividends on the milk or cream furnished. Some of these co-operative creameries are ten to fifteen years old. The returns for thirty of them for the year ending January 1, 1891, showed payments net to patrons for cream taken at the farmers' doors, of twenty-one cents per pound of butter as the average for the year, in spite of the lowest markets known for years. In ordinary markets the best creameries pay from twenty-four to twenty-seven cents net to patrons for the whole year.



DR. HENRY J. DETMERS,
Professor Veterinary Surgery, Ohio State University.

tents spread out and sprinkled with cold water.

"The most troublesome part of the treatment of seed-wheat for smut consists in drying the grain so that it may be sown by the drill. By mixing it with land-plaster it may be dried so as to be readily sown by hand, but it is difficult to sow plastered wheat evenly through the drill. It might possibly be dried in the sunshine without plaster, but considerable time and frequent stirring would be required. It is probably this difficulty, more than the trouble and expense of bluestoning, which has caused that process to be so little practiced; but with the present increase of smut, it seems that we must be willing to incur some trouble to prevent its ravages.

"The loose smut—a blast—of wheat probably causes nearly as much loss to the farmers of Ohio as the stinking smut,

dairymen, instead of the lion's share being taken by the proprietor of a factory. Under this management, the co-operative creamery and cheese factories will pay from five to twenty per cent better returns to the farmers than proprietary factories during a term of years. Co-operation enables the dairymen to get all the profit, while at the same time reducing expenses.

The creamery system or factory method of butter-making is now rapidly supplanting the making of butter on the farm in a small way. The co-operative system greatly reduces the work on the farm and in the home, while adding to profits without going to a great outlay of time and capital to change methods of farming.

The best way to proceed is as follows:

Those most interested should talk up the matter, secure further particulars by

FARM AND FIRESIDE.

ISSUED 1st AND 15th OF EACH MONTH BY
MAST, CROWELL & KIRKPATRICK.THIS PAPER HAS BEEN ENTERED AT THE POST-OFFICE
AS SECOND-CLASS MAIL MATTER.

TERMS OF SUBSCRIPTION:

One Year, - (24 Numbers), - 50 Cents.
Six Months, - (12 Numbers), - 30 Cents.

The above rates include the payment of postage by us. Subscriptions can commence any time during the year. Send for Premium List and see premiums offered for obtaining new subscribers.

Payment, when sent by mail, should be made in Express or Postal Money Orders, Bank-checks or Drafts. WHEN NEITHER OF THESE CAN BE PROCURED, send the money in a registered letter. All postmasters are required to register letters whenever requested to do so. Do not send checks on banks in small towns.**Silver**, when sent through the mail, should be carefully wrapped in cloth or strong paper, so as not to wear a hole through the envelope and get lost. Postage stamps will be received in payment for subscriptions in sums less than one dollar.**The date** on the "yellow label" shows the time to which each subscriber has paid.**When money is received** the date will be changed, which will answer for a receipt.**Discontinuances**. Remember that the publishers must be notified by letter when a subscriber wishes the paper stopped, and all arrearages must be paid.**When renewing** your subscription, do not fail to say it is a renewal. If all of our subscribers will do this, a great deal of trouble will be avoided. Also, give your name and initials just as now on the yellow address label; don't change it to some other member of the family; if the paper is now coming in your wife's name, sign her name, just as it is on label, to your letter of renewal.

We have an office at 927 Chestnut Street, Philadelphia, Pa., also at Springfield, Ohio. Send your letters to the office nearest to you and address

FARM AND FIRESIDE,

Philadelphia, Pa., or Springfield, Ohio.

The Advertisers in this Paper.

We believe that all the advertisements in this paper are from reliable firms or business men, and do not intentionally or knowingly insert advertisements from any but reliable parties. If subscribers find any of them to be otherwise we should be glad to know it. Always mention this paper when answering advertisements, as advertisers often have different things advertised in several papers.

Our Farm.

RAPE CULTURE AND ITS USES.

There has been a growing need of some cheaper food supply that could serve the sheepmen of this country in the production of mutton and wool. As a rule, farming has certain rotation of crops applicable to the situation and wants of the farmer. These crops have been cash products, too valuable to be fed to animals that produced cheap marketable products. This was regarded as especially so in the case of sheep while wool was the main purpose in the keeping of flocks.

Catch crops, as we now understand, are crops produced outside of, and if in possible connection, with—but not to seriously interfere with—the regular crops. These have already been referred to, and it is the intention here to only consider an old English crop of large economic value as a food crop for fattening lambs.

By permission of Prof. Thomas Shaw, I am permitted to use what he says about

RAPE CULTURE.

The plant belongs to the turnip family, which it very much resembles in its foliage, seed and season of growth. The root is fusiform—spindle-shaped and stringy, not bulbous. On average soil it grows, when sown in drills, from one to two feet high; on soils especially rich it grows to the height of three feet or more. Rape has long been cultivated for its seed, which yields a valuable oil. The variety used for pasture in this country is known as the Dwarf Essex.

The rape plant, like the turnip, is suited to temperate climates. Professor Shaw thinks "probably it will be found to grow in climates that are inclined to be cool rather than warm." In England it lives over winter in the fields, and produces a crop of seed. It might not do so with any certainty in the northern sections of this country. The frosts of Canada have sometimes interfered with the maturity of the crop.

It is suited to a variety of soils. "Fairly moist, free-working lands rich in organic matter are most suitable. Black loams are very suitable after the plants once get a start in them, owing to the large amount of humus which they hold." Any good turnip or corn lands will produce rape, while poor, sandy or stiff clay lands are unsuitable to it.

This plant is an excellent cleaning crop when sown in drills and cultivated. It is often and profitably grown between two crops of grain after a fall-plowed meadow;

or, a clover-field turned as soon as the first crop is cut makes a good place for rape. A sod turned in August and sown to rye, cut green and followed by rape, does well.

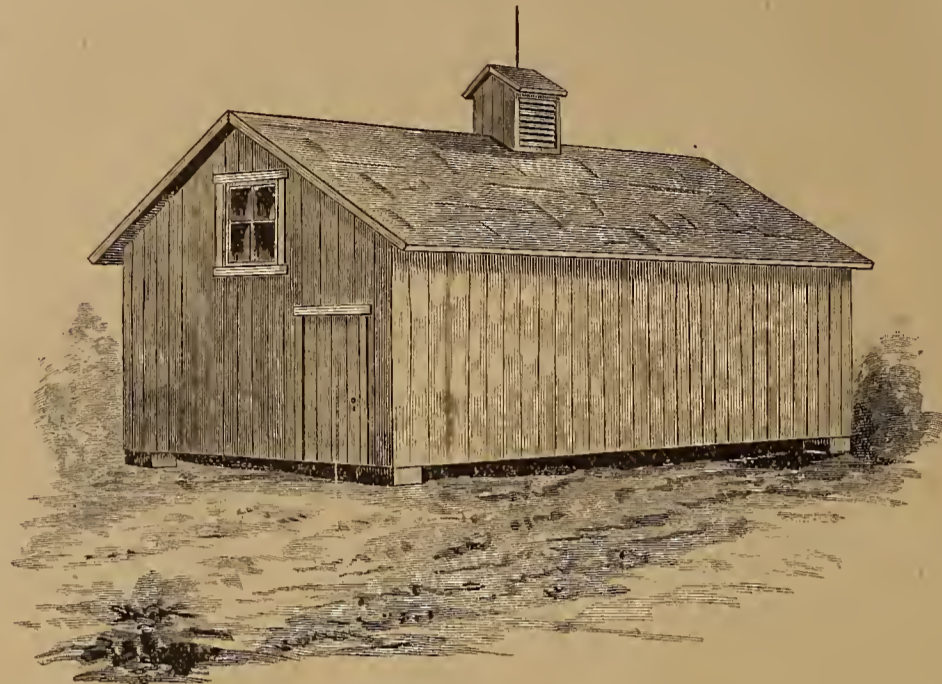
Much will depend upon the preparation of the soil in securing a profitable crop of rape. Some sow a field in rye for winter and spring pasture. In June the land is plowed for rape. The land should be harrowed and rolled frequently until about the first of July, when it should be sown in drills from twenty-two to twenty-four inches apart. From three to five pounds of seed is drilled per acre. When the

half months, and that when grown as a sole crop of the season under favorable conditions, it will sustain a much larger number.

Sixth. That ordinary grade lambs when pastured on rape without any other food supplement will make an average gain of ten pounds per month.

Seventh. That rape is admirably adapted for growing as a catch crop, to be fed off or plowed under as a green manure.

Eighth. That rape as a cleaning crop is probably without a rival in our present system of agriculture.



SWEET POTATO STOREHOUSE.

ground is clean and the crop is for a catch crop or for green manure, the same amount of seed sown broadcast will be sufficient. "It may be sown in drills; from one to two pounds of seed may be used, according to the condition of the soil." The use of a turnip-drill is recommended. The seed costs about ten cents per pound.

CULTIVATION.

When the rough leaf has made a good start in the rape, the cultivator may be started, running as close to the rows as is consistent with the safety of the young plants. "This should be continued until the tops of the rape come together across the rows." The Canadians practice hand-hoeing where weeds are likely to do an injury to the crop.

EXPERIENCE WITH RAPE.

The Ontario Agricultural College Experiment Station, in 1889, grew twelve acres of rape at the station for pasture. In 1890 some fifty-four acres were grown for the same purpose, and in 1891 about forty acres; ten acres were grown as a catch crop in 1890, and six acres in 1891. The details of the experiments are omitted here. "Flat cultivation is recommended instead of ridges; drills were preferred to broadcast; salt and nitrate of soda are serviceable as fertilizers for rape; that oats do not seem to render much service when fed along with rape that is being pastured by lambs, and that rape and old meadow pasture are superior to rape alone as a pasture for lambs." Rape is highly recommended as a pasture for sheep and lambs, and for cattle that are fattening. It is considered to be worth two or three times that of one cutting of clover of like area. The results in fattening lambs are marvelous. It was used as a soiling crop and fed to stock indoors. Some precautions should be observed in turning cattle and sheep upon rape, lest they bloat, scour, etc.

CONCLUSIONS.

First. That in nearly all the cultivatable portions of the dominion the climatic conditions will be found suitable to the growing of rape.

Second. That a large proportion of the soil of Ontario is well adapted to the growth of rape.

Third. That rape is especially valuable as a pasture for fattening sheep and lambs, owing to the season of the year at which it grows, and to its high feeding value.

Fourth. That it is an excellent food when preparing lambs for winter fattening.

Fifth. That one acre of rape grown in drills immediately after a crop of rye cut as a green food will pasture from ten to sixteen lambs for from two to two and a

Ninth. That much care and prudence must be exercised in pasturing animals on rape, or serious losses may follow.

Tenth. That rape is not an exhaustive crop on the soil when pastured off, as what has been taken from the cultivatable area is returned to it, and something in addition.

In a personal letter from Prof. Shaw, on the subject of rape, is the following testimony: "I fully believe that in a few years more than 10,000,000 lambs will be annually fattened upon rape in your country, so excellent is it for the purpose."

R. M. BELL.

RAISING AND STORING SWEET POTATOES.

S. GRAY.

In 1860 I commenced to grow sweet potato plants and potatoes. I had to send to Cincinnati for seed. As seed in the spring was always dear, I tried to save my own seed. I tried in various ways, packing them in boxes and barrels, some in sand, some in sawdust and shavings, but had no success. Some would heat and some would chill; I could not hit upon the right temperature, so I concluded to build a potato-house for keeping sweet potatoes for seed.

I built a house 12x16 feet, setting it up off the ground the same as a corn-crib, to keep the rats and mice out and to have a circulation of air under it; I built it double. I used 2x4 studding for the sides, using matched flooring for the first siding. After the first siding was put on I nailed on some more 2x4 studding on this siding, leaving 4 inches space; this I filled with sawdust, and on the inside studding I lathed and plastered; this left me 4 inches of space behind the plaster, making the sides about 10 inches thick. I also made a double floor, floored both sides of the joists and filled in between with sawdust, using joists 2x8 inches. Overhead I sealed with matched boards; over this I laid sawdust 6 inches thick, before the roof was put on. When done, I had a house that was rat, mouse and air tight. I put a window at each end near the ceiling, with sliding sash. Also a vent-hole up through the roof, with a slide at the bottom to regulate the draft. This was a box tube 4 inches square, with a cap on the top to keep out the rain. The door was made the same as the sides and fitted tight.

Inside of this house I built a bin 2½ feet from the floor and the size of the inside, lacking 2 feet space around three sides and 3 feet space along the front of the door. This gives room to get around the bin. The sides of the bin are movable, to accommodate the depth to the amount of potatoes to be put in.

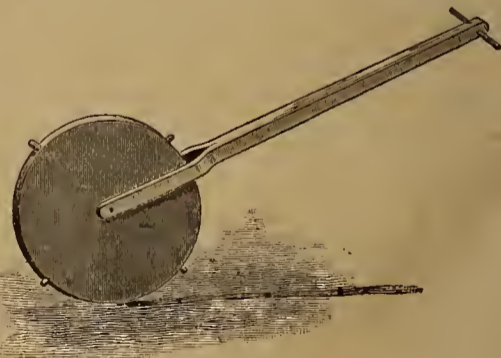
After the potatoes are all in the bin, I let them sweat awhile, and to help dry them out, I put two lighted lamps (bracket-lamps, such as they use in stores, for coal-oil). These I put under the bin and let them stay eight or ten days, shifting their position every day; then I take them from under the bin and put them in the corner of the two-foot space, one in each opposite corner, so as to equalize the heat through the room, changing the lamps to the other corners every day. When the potatoes are done sweating, I cover them over with mosquito-netting; upon this I put three inches of sawdust or cut straw. This is left on until the potatoes are taken out in the spring. I hang a thermometer inside, on a level with the top of the bin, changing its position to watch the temperature and keep it even. The temperature must be kept at 45° as near as possible; it must not range below 40° nor above 50°. If the room gets too warm, put out a lamp; if too cold, add another lamp. It is very easy to regulate the temperature with lamps. I set the lamps in crocks, so as to be safe in case of accident. The lamps I trim and fill night and morning. There is no sitting up nights to fire up; the large-sized lamps will burn all night.

Since I adopted this plan I have lost only about ten per cent in rot and shrinkage; mostly shrinkage. I tried many ways before I hit upon this plan. The main thing is to have a dry room and even temperature. When it is very cold outside I shut the room up tight. A bin in a room this size will hold from 150 to 200 bushels. I save the medium-sized potatoes for seed and sell the largest.

Now, a few words about raising sweet potatoes. I select light, sandy loam. Have used the same land for twenty years, and my crop was as good at the last as at the first. I use rotten, barn-yard manure and wood ashes, broadcast, and ridge quickly before the manure can get dry. I ridge one way with a horse, throwing two furrows together; this brings the manure into the center of the ridge. I plant 15 inches apart, ridges 3 feet apart. I use a marker—a wooden wheel with some wooden cogs nailed on the edge; a wheel 18 inches across, with four cogs, will make the marks 15 inches apart. Get a split stick and put over the wheel; drive a nail through the ends of the stick and through the center of the wheel, and you have it. It is only a few minutes' work. It pays if you have many to plant; try it.

In digging the potatoes, those for seed should be left on the ground until they are dry, and handled as carefully as though they were eggs, for if they get bruised they will not keep. Do not let the potatoes lay out all night. Gather them into the bin before the evening dew falls on them.

I forgot to state that I do not plow the land for sweet potatoes. I run the cultivator over it before the manure is put on; this gives a hard bottom in the



WHEEL MARKER.

ridge. By plowing deep you get long potatoes; by not plowing, you get short, thick-set potatoes, which are the most desirable.

DRONE BEES.

The prodigality of nature is shown in the bee world in the overproduction of drones. Briefly, the office of the drone is to fertilize the queen. The virgin queen leaves the hive, meets the drone in the air, and then returns to the hive, not leaving it again until she leads out a new colony, and possibly she may never leave the hive again during her life of four or five years. It may be seen then, that if the colony does not swarm during the season, only one drone is required. If it does swarm and another queen is produced, only two drones in a season can be of any use to the colony in question. And

it might happen that not one drone in the colony would be used to fertilize the queen or queens in the same hive, for the queen in her flight might not meet one of her own drones, but one at a distance in another colony.

A colony of Italians was allowed to raise as many drones as it pleased, in order that there might be less danger of the queen meeting a foreign drone. Probably the colony raised a thousand drones, and it was supposed that the progeny of a valuable queen would meet one of these in her flight. About two miles away were some common black bees, and the new queen missed all her own drones and mated with a black drone. Her progeny were all hybrids. In this colony, then, the work of raising drones was wasted, as far as its own queen was concerned, although some of these drones might have fertilized other queens. The drones in question feeding on good honey, much too good for them, were given a dose of insect-powder. A drone is the most helpless of insects. He has no weapon of defense (no sting), and he is incapable of getting his own living. He can eat, but owing to lack of tongue, or the right kind of a tongue, he can gather no honey.

The only explanation of the great waste of drones on the part of the bees, is that the bees run no risks, and overshoot the mark to be on the safe side. If a colony of bees loses a queen, it loses its life; every member must die unless the queen left eggs. From the eggs may come another queen, but if there be no drones or one drone in the hive, or if the queen in her flight does not meet a drone from some other colony, then the colony is no better off than it was without a queen, for the queen unfertilized is of no value. Therefore, the instinct of self-preservation must be the cause of raising a great crop of drones. When the swarming season approaches, indeed, up to July or August, or as long as the honey comes in, the bees build drone cells and raise drones in great quantity if unmolested.

In the modern apiary it is easy to control the drone raising. Drone comb may be cut out as fast as made, and the drones already hatched may be caught in the drone trap. The solicitude of the workers for the drones is amusing. Judging by appearances, the drone has authority to stop an incoming bee on the alighting-board and demand his honey; he gets it. The worker at once presents his tongue to the mouth of the drone, and using it as a hose, pumps his half drop of honey into the mouth of the drone. If drones be confined in a wire-cloth cage, the workers will feed them by thrusting their tongues through the cloth. GEORGE APPLETON.

A SIMPLE LAND MEASURE.

There exist various contrivances for the linear measure of land surface. There are steel tapes, which are expensive; linen tapes, cheaper, but of short durability and liable to get soiled, while both require two persons to handle them. Another kind is offered by agricultural implement makers in the form of a nave, from which spokes point out, which revolves by being pushed by a handle; but as these can prick the surface only at short intervals, say twelve inches, they cause a troublesome count unless furnished with an expensive speed indicator, and liable to break if stuck into a fissure.

The contributor therefore wishes to draw farmers' attention to a simple, yet effective and durable one, which any one handy with tools can make himself, and at the same time possess an instrument which offers a variety of measures.

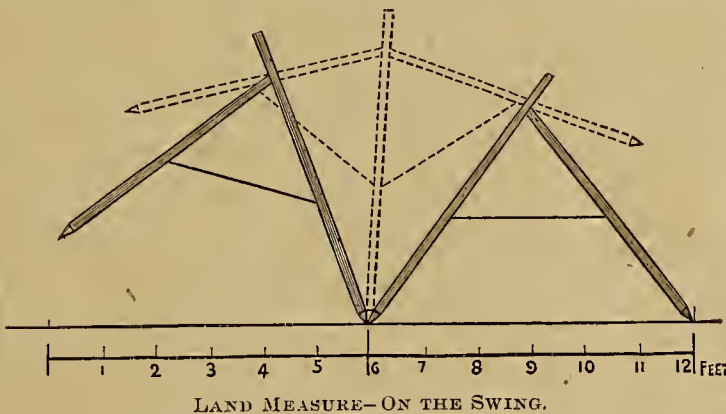
This measure, shown in the illustration, is not unlike an architect's dividers, and consists of two straight sticks of a diameter of $1\frac{1}{4}$ inches at top and $\frac{3}{4}$ of an inch at the tip, made of firm, yet tough wood, neatly planed and scraped, joined by a tenon and shod with $1\frac{1}{2}$ -inch hollow ferrules. The tips are exactly six feet apart from point to point, and this must be an object of having correct. The right leg is 5 feet from point to inside, where it is joined to the other leg by a tenon going right through; the left one is 8 inches longer, $1\frac{1}{2}$ inches counting for the slanting thickness of the top of the right leg attached to it, and the remainder for the handle. At the center of each leg, 2 feet 6 inches from the points and equidistant from inside apex of triangle, is an iron rod, of 5-16 of an inch in diameter, stuck

right through, having on the inside, meeting the legs, a small collar, and on the outside a flat nut, afterwards bent to fit the convex surface, or the end of the rod riveted to a head over a small plate, securing it firmly. Instead of this rod, a wooden bar, of a diameter of the leg it joins, might be substituted, tenoned and wedged from the outside, holding it equally firm.

MEASURES.

The handle is six inches.
Distance from points to bar, and from bar to inner apex, four feet.
Right leg, five feet.
Left leg, five feet eight inches.
Linear measure of base, six feet.
And lastly, on either leg, a yard measure might be divided off in inches.

To manipulate this measure, both points being lightly fixed in the ground, lay the palm of the right hand on the highest point of the right leg, encircling the handle with the thumb. Place the right foot at the side of the right leg and commence walking by striding out with the left leg, and at the same time, which occurs intuitively, press the top forward till the right leg of measure assumes an elevated position, and then give the top a



shoving hoist, by which the handle revolves in the hollow of the hand and performs an outward half circle; meanwhile the operator has taken three more steps, and the right foot landing at the same time as the right leg of measure, having been steered in as straight a line as possible.

A few trials masters the use of it, which thus for every four steps measures twelve feet. A smaller person, having to use such measure, might lower the apex to suit himself, say to three feet six inches; but never leave it out of view that the distance between the two points must always be six feet.

Irrespective of its usefulness, it is recommended to such persons who are fond of exercise and sport, for it not only forces to a healthy, brisk walk, but also to a muscular use of the arm; stimulates to precision, count of swings and an eagerness to reach the goal. A BROOME.

COMMENTS ON CURRENT LITERATURE.

BY T. GREINER.

FRUIT CULTURE.—The author of the little work entitled "Fruit Culture," of which a copy of the third edition, elegantly and substantially bound in heavy cloth covers, has been sent me by the publishers, is W. C. Strong, of Massachusetts, who, like me, has attended many meetings of the American Pomological and other fruit grower's societies, knows full well how highly American fruit growers regard the word and authority of Mr. Strong. We know that he does not talk to us from the desk, but from the soil, of which he is a most enthusiastic and skilled cultivator and manipulator. There is always the right practical ring to his sayings and writings, and his book on "Fruit Culture" makes no exception to the rule.

Evidently, and Mr. Strong so states in the preface to the third edition, the work is not designed as an exhaustive treatise upon the culture of fruits. Downing's famous work, "Fruits and Fruit Trees of America," and J. J. Thomas' hardly less-known "American Fruit Culturist," besides "Barry's Fruit Book," seem to fill that place so completely that not a gap seems to be left. What Mr. Strong has aimed to give us is a rather compact and popular "guide to the owner of a home-stand, who seeks for brief rules to meet his recurring exigencies." In this the author has succeeded admirably. The book gives valuable hints about the selection of a rural home, about arranging and planting, both in ornamental and useful lines; it tells how to care for fruit,

irrigate, cultivate, thin, label and many other things. Its directions for fighting insect and fungous pests are brief, but comprehensive and practical. It explains, with plenty of illustrations, how to bud, graft and propagate.

While the professional fruit grower may and should not be satisfied unless he also gets the fuller information that he finds in the larger and more expensive works already mentioned, I think that Mr. Strong's book is just the one that every man who grows a little fruit for his home use should own. It is published by the Rural Publishing Co., New York City. I do not know the price, but think \$1 will pay for it.

I know Mr. Strong to be a successful grower of the large English gooseberries. The following is an extract from his remarks on the subject in the book:

"The European varieties are subject to parasitic growth commonly known as mildew when cultivated in this country. Our few native varieties are comparatively exempt from this disease; but they are much below the English varieties in quality, and are mainly used for pies, sauces and jams. Some cultivators have good success with the English kinds by planting under the shelter of fences, buildings or trees, and by mulching with salt hay or salted marsh hay, for the purpose of securing uniform dampness. Recent results in the application of fungicides give good reason to expect that we can control this powdery mildew. Besides dusting with sulphur, spraying frequently with the copper solutions is recommended."

I am under the impression that the most effective fungicide yet found for this gooseberry mildew is potassium sulphide, or liver of sulphur. Spray the bushes with a solution of one ounce in two gallons of water, and repeat once a week or every ten days. I have picked out this item on gooseberries because I think this fruit is not appreciated in America as it deserves.

The green fruit, both of the American and English sorts, makes a most delicious sauce. The markets also are hardly ever supplied with this pie and sauce material, and whoever will supply a growing demand can start a paying industry. I am also extremely fond of the ripe fruit of the larger English varieties, and by planting in partially shaded locations and mulching heavily with any kind of coarse stuff, we have no trouble in raising a full supply. The finest crops, however, which I have ever seen were grown on bushes planted right under a low, vine-clad, horizontal grape-trellis, in tide-water Virginia.

"THE NEW CELERY CULTURE."—A little pamphlet with the above title has been sent me by the same publishing company (Rural Publishing Co., New York). This really is an interesting thing, and gives ideas that will certainly revolutionize celery growing fully as much as the new onion culture revolutionizes onion growing. What gigantic fools we have been to bestow all that vast amount of labor on our celery patches, and to move those many cubic yards of soil for the purpose of blanching the stalks when, with a little more concentration of effort, by putting the same manure on one quarter the area, by planting closely of the right varieties, we might have let the crop do its own blanching under its own shade.

Don't tell me, friends, that the plan is not feasible. Come and see my patch and learn how easy it is to grow a heavy crop by the new method. My plants are in rows one foot apart, and stand six inches apart in the rows. Mr. Robert Niven, the author and originator of the new plan (although it is really not quite new), sets his plants seven by seven inches apart. I am as yet in doubt as to which is the best distance, and am now experimenting to find out.

In a very dry season the application of water by irrigation may be needed to supply that vast amount of moisture which such a close and compact growth requires. The plant food, of course, is more easily supplied. I use heavy ma-

nuring, heavy top-dressing with fine compost, and heavy applications of fertilizers, especially dried blood. Mr. Niven uses fertilizers almost exclusively, at the rate of 2,600 pounds or more, in two applications, per acre. The present season, with its abundant rainfall, has been quite favorable to the growth of early celery, and artificial watering has not been required.

I only regret now that I did not plant one quarter or one half of an acre, instead of a little patch of one thousand plants. Next week I am going to plant more largely of late celery. Mr. Niven talks of realizing \$2,000 per acre. I have no doubt that it can be done. Later on I will have more to say on this subject.

UNDERGROUND IRRIGATION.—This subject has always had a great deal of fascination for me. I am not a believer in "Cole's New Agriculture," a system of sub-irrigation which made quite a stir a few years ago, but I am sure we might with some crops, often obtain astonishing results by laying a system of tiles just below the reach of the plow, and irrigate the entire patch by letting a steady stream of water flow into these tile drains for awhile. I find the following paragraph in one of Prof. Green's bulletins (Ohio experiment station):

"Underground or sub-irrigation has been experimented upon two seasons in the greenhouse, the primary object being to supply lettuce-plants without wetting the leaves, in order to test the theory that wet foliage favors the development of the rot fungus. These experiments are not complete, but the evidence is favorable to the plan. Not only is there less rot upon the sub-irrigated plants, but the growth is much better than upon those where surface watering alone is practiced, the increase in yield of crop being from 20 to 40 per cent. The indications at present are that this method of watering promises much for lettuce-growers, but more experiments are needed to settle some points."

Yes, sub-irrigation, both for lettuce forcing and for outdoor gardening, especially for celery-growing, is a subject which we should more fully investigate. I believe there are fortunes hidden in it. Let us experiment a little more earnestly and methodically in this field.

CO-OPERATIVE CREAMERIES.

The co-operative system must continue to grow in magnitude until a large proportion of all the milk produced is worked up at central points. Centralization is the order of the day, and nowhere is it more evident than in dairying. There will be some increase in the system where private dairymen supply individual customers with butter, but there is a limit in this direction, while for the factory system I see none.

The bringing together of milk from off a hundred farms to one central point means that a hundred farmers' wives are relieved from irksome labor, and in place of a hundred kinds of butter in as many style packages, each paying heavy express charges, there is one lot of uniform quality, shipped at low rates in the refrigerator car. In the creamery I see a saving of an enormous amount of energy on the farm which will be set free and utilized in the direction of better dairy farms, pleasanter homes and improved social conditions.

Who shall control the creameries? Upon this important question I have arrived at no definite conclusions. There is a natural desire among farmers in these days to control their own business, and who can blame them for it? The farmer's occupation in a measure prevents him from being a careful, shrewd business man in the usual sense of that term. His work is to produce rather than to barter. In consequence of the desire among farmers to manage their own business, we have seen scores and hundreds of co-operative creameries spring up in the West. Because of enmity, jealousy and lack of business capacity we have seen a large per cent. of these factories become bankrupt and pass into other hands.

If our farmers would have more patience with each other, and would put the same energy to work along business lines that is now given over to neighborhood quarrels, co-operative factories will rule the day. Here and there we find co-operative factories successfully managed, which stand as monuments of neighborhood good feeling and brotherly confidence. May their number rapidly increase.—Professor Henry.



Mrs. Richardson.

My Wife

Was miserable all the time with kidney complaint but began improving when she had taken Hood's Sarsaparilla one week, and after taking three bottles was perfectly cured. I had Heart Failure, Catarrh, and Liver

Complaint. Could not sleep, bloated badly, had pains in my back, ringing noises in my ears. Hood's Sarsaparilla gave immediate benefit, sound sleep, and good health." H. C. RICHARDSON, Siloam, N. Y.

HOOD'S PILLS cure Nausea, Sick Headache, Indigestion, Biliousness and all Liver troubles.

Our Farm.

A PETTED LITTLE GARDEN CORNER.

BY JOSEPH.

A swift-running little brook traverses the corner of a field which belongs to a brother of mine, cutting off a piece scarcely a rod and a half in length and a half rod wide. Land is not high-priced in that vicinity, and few persons would entertain such a thought as to put an out-of-the-way corner like that to any special use. My brother, however, has found a way to utilize it which is truly admirable and worthy of imitation by others who may have a similar corner at their disposal.

The little spot in question is in the northwest corner of the field, sloping slightly to the south and east, and being well protected against the cold north and west winds by a board fence. My brother was shrewd enough to see that this was just the spot to raise early vegetables for his home use, and a spot, too, which could be expected to repay munificently a little extra care and some special treatment. So the whole spot was filled up to the depth of about a foot with a mixture of black, sandy muck (of which a bed was fortunately close by) and old, well-rotted sheep manure. This makes the soil so loose and mellow that no tool of tillage is ever brought into use. The work is all done with hands and fingers. Of course, such a spot would be a paradise for fowls, but a fence of wire netting makes the bed secure against their unwelcome visits. What an immense amount of radishes, lettuce, small table beets, soup carrots and other stuff, onions amongst them, this little corner furnishes with a minimum of labor in the course of a year is truly wonderful, and I need hardly say that all these vegetables are of unsurpassed quality, crisp, tender and sweet. All the radishes and lettuce that the family can possibly use all season long, and more besides, come from this bed. I think the neighbors also get a liberal taste of it, for there is really a great abundance of these vegetables all the time, but my brother is setting a few plants or sowing a pinch of seed every few days. A few rows of lettuce are planted about three inches apart in the row. When the little heads begin to cry for more room, every other one in the row is gradually pulled up for the table, leaving the plants six inches apart. When these in their turn begin to crowd, the thinning process is repeated, so that the plants finally stand twelve inches apart each way. Even then it takes but a few days before there will be a solid mass of the most beautiful lettuce imaginable. It is the delight of the household, and of the neighborhood, too. If any of it goes to seed, as is very likely the case, there being so much of it, it is taken to the hen-yard, and you may be sure that the fowls, especially if kept in confinement, will relish it greatly.

In the meantime, however, another crop is coming on. In another part of the bed radishes had been planted. These, of course, require only three or four weeks' time for their growth, but even long before they are fit for use, lettuce is planted in a row midway between each two rows of the radishes. A similar course of close cropping and successive planting and rotative system is followed with other vegetables, especially the carrots and beets before mentioned. Indeed, the bed is thus made productive during all the regular season, from early spring until snow flies. Still, this is by no means the end of its usefulness. Before winter sets in in good earnest, some ordinary cold-frame boxes are set directly upon the nice, mellow soil, enclosing such still unfinished crops as there are yet on the land. The sash or sashes are put on and the crops in question have a chance to mature, thus adding a month or more to the season of garden enjoyment.

The cold-frames are also brought into use in early spring. Usually about the first of April the soil in the bed is in condition to be planted, and then no time is lost. All that is needed is to put on the sash, and seed-sowing may begin without further ceremony. By the time the neighbors begin to think about making garden, this petted corner is yielding the first crop of radishes and lettuce.

While it is true that this bed brings in

no cash, I would not be able to point out a more profitable piece of land of the same size on the farm, or even on any other farm in the vicinity. The cash value of its products in pleasure, satisfaction and table delicacies in and out of season are almost beyond computation.

The possibilities which lie hidden in a little corner garden like the one described, however, are probably not nearly exhausted by my brother's methods. For instance, quite a respectable supply of the finest celery imaginable might also be grown in a part of that corner, say in one of the cold-frames, three by six or six by six feet. This is a new method which nobody except myself has ever tried, so far as I am aware of, but let me urge you to try it. Just prepare the soil, making it very rich; in fact, you cannot make it too rich, then set on your frame and set in the plants seven or eight inches apart each way. If the weather is dry, water occasionally and very thoroughly. No sash is wanted. Just let the stuff grow, encouraging it to make as much and quick growth as possible, and before winter comes you will have a lot of celery worth having, without the trouble of moving great quantities of soil in handling and banking. This is all I am going to say on this subject at present. Go and look for the proper spot suitable to prepare your garden corner (or corner garden) and then work it up on the lines here suggested. That little piece of ground is chuck full of good things, and it won't require a great deal of skill or labor either to get them out. By all means make the trial; it is worth all it costs.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

STRAWBERRY VARIETIES.

W. F. ALLEN, JR.,
(Concluded.)

Parker Earle is one of the most valuable late varieties grown, very productive, of medium size, and continues to bear later than most varieties. Texture firm.

Jessie is a large, fine berry where it succeeds. It is easily killed by frost, but when a crop can be obtained it is very fine.

Middlefield is a fine berry, large size and perfect form, and moderately productive.

Pineapple is a good-flavored berry, but soft, unproductive and unprofitable.

Warfield No. 2 is one of the best market berries grown. It is of fine form and color, above medium size, and one of the most productive in cultivation.

Burt Seedling—The fruit resembles the Wilson Albany, and it is very firm, very productive and a profitable market berry.

Haverland is a large and productive berry, and is valuable for any purpose for which strawberries are grown. It is positively one of the very best.

May King is valuable with some, but not with me.

Belmont is a large, fine berry, but not very productive.

Crescent is very productive, medium size, and largely grown for market. It will grow under almost any treatment, and is often termed the lazy man's berry.

Gandy is a large, fine berry, moderately productive and valuable for its lateness.

Oregon Everbearing, so called, but has failed to bear a single berry on my grounds outside the regular fruiting season.

Shaw is the same as Sharpless and Ontario, and is a good kind.

Bubach No. 5 is a grand, good berry, large, productive and very attractive. Has no fault except it be a little too soft for distant shipment.

Crawford is large and firm, productive on rich, springy land, but not profitable on poor, light soil.

Mrs. Cleveland is productive and a large, showy berry for a near market, but not firm enough for distant shipment.

Standard is a large, reliable variety, productive.

Edgar Queen is large, productive and a very nice berry.

Enhance is of large size, firm and productive.

Boynton is of medium size, productive, and a good shipper.

Sterling is T. B. Terry's favorite, and it is indeed a large, fine berry, of beautiful color and fine flavor.

Cumberland is a general favorite for

home use, and is also a good market berry, moderately productive and of large size.

Stayman's No. 1 is very late, very productive and very firm. A good kind for market where late varieties are profitable.

Eureka is large and productive, but with me it is too soft to be of any value except for the home market.

Martha is of medium size, late, firm and productive. A good market berry.

Gov. Hoard is of large size, moderately productive and reliable.

Wilson Albany is the old stand-by, and is still good where it does not rust too badly.

Auburn, from spring-set plants, seems to be all right.

Princess is of large size and fine quality, productive and valuable.

Muskingum has only been fruited at my place on spring-set plants, but seems so valuable I feel inclined to make note of it here. Fruit large, round, solid and productive. I regard this as very promising.

Gillespie is a son of the Haverland, and very much resembles its parent, except that it has a perfect blossom. I regard it as valuable.

Regina is very late, productive and of medium size.

Gen. Grant was introduced last spring by an Ohio nursery. It is a large-sized berry and seems promising.

Western Union somewhat resembles Bubach No. 5, and is large and promising.

SEEDLINGS.—I have some very fine seedling strawberries, several of which are far superior to some varieties that are now being put on the market. These seedlings are the result of planting a selection of large berries, none of which measured less than five inches in circumference. The seed was sown in 1889, and seven of them I have selected from hundreds raised. I shall plant several thousands of these, and after further trials, should any of them seem worthy of introduction, I will report on them separately, and in the meantime shall have them tried at the various experiment stations.

NEW VARIETIES.—The following new varieties are now being tested, and a report on them will be ready in due time: Dayton, Van Deman, Beverly, Dew, Accomack, Leader, Gen. Putnam, Swindle, Southard, Beebe, E. P. Roe and others. The following are about worthless with me: Miami, Daisy, Hulbert, Cloud, Eureka, Pineapple, Westbrook, Belle of Lacrosse, Crystal City, Viola, Puritan, Parry, Felton.

EXTRACTS FROM CORRESPONDENCE.

FROM MISSOURI.—Our wheat crop was poor. On account of wet weather few oats were sown. Most of the corn here was planted after the middle of June, and the crop will be small. Pastures were never better at this time of the year, and the hay crop is large. The fruit crop is a failure, except grapes and small fruits. J. M. Lancaster, Mo.

FROM ILLINOIS.—We have had an unusually wet season. A great share of the corn was planted late. Oats are short and planted too late to make an average yield. Wheat promises a fair return. Hands were scarce. Corn-plowing, haying and harvest were here together. The hay crop will be heavy. This is one of the finest farming regions in Illinois. Land sells from \$60 to \$100 per acre. A crop failure has not happened here for thirty years. Corn is worth 41 cents; oats, 27; wheat, 75. Decatur, the county-seat, is second to none in the state for enterprise and push. J. P. B. Maroa, Ill.

FROM TENNESSEE.—Our season is about six weeks earlier in spring and six weeks later in fall than northern Ohio. With proper preparation we can have grazing for stock all winter. We grow successfully all crops grown in Ohio. Fruits of all sorts, especially grapes and small fruits, grow here to perfection. Some of the land here is poor, but much of it is as good as can be found anywhere. It ranges in price from \$10 to \$60 per acre. Good farms can yet be had at \$15 to \$35 per acre. Wheat yielded better than expected. Corn is the best crop for years. All spring crops are extra good this year. E. L. G. Landau, Tenn.

FROM FLORIDA.—I have just returned from a visit to the pear region. The pear-blight has made its appearance and the loss will be a heavy one. The extensive vineyards of M. Dubois, near Tallahassee, are beautiful. He has been shipping fine varieties since the 28th of June and receiving high prices. He thought his vineyards were as early as the Orlando vineyards, two hundred and fifty miles further south. He was shipping Le Conte pears and receiving \$5.50 per barrel. Twenty-

five miles west of this place is Quincy, the booming tobacco town of the state. The Owl cigar factory employs two hundred and fifty-five hands, and makes over 800,000 cigars monthly, receives \$25,000 dollars for the same, and has orders ahead for 500,000. It is putting up a new factory to double its capacity. The farmers around here have excellent crops of tobacco. Judge Shearer has a field of ten acres which will average nearly eight hundred pounds of Cuban seed tobacco to the acre. Last year he received 40 cents per pound, and this year expects 50 or 60 cents. The McKinley tariff rates on foreign tobacco will naturally advance tobacco interests. Quincy is a growing and pretty town. C. K. C. Hampton, Fla.

See in our offer in July 1st issue how you can secure the beautiful picture, "Columbus at the Royal Court of Spain," in a rich, heavy, 6-inch gold frame, for only \$1.50. Also read the offer on page 11 of this issue.

SEED WHEAT FREE.

Wilson's Fall Catalogue for 1892 containing price list and description of new and most productive varieties of Seed Wheat, White Rye and Winter Rust-proof Oats, Fruit Trees, Small Fruits, Strawberry plants, Asparagus roots, &c., for Fall planting. Also thoroughbred land and water Fowls, mammoth bronze Turkeys, registered Pigs, German Hares, &c. Catalogue with five samples of best kinds of Winter Wheat sent FREE on application. Address

SAMUEL WILSON, Mechanicsville, Pa.

CIDER
MACHINERY.
POWER SCREW PRESS
HYDRAULIC, OR
KNUCKLE JOINT
Graters, Elevators, Etc.
Boomer & Boschert Press Co.
99 W. Water St., Syracuse, N. Y.



A ROAD WAGON

\$32.00 To introduce our goods, we will give FREE. one of these elegant Road wagons to any one who will sell Six (6) for us. Regular price is \$65.00, we sell it for cash with order for \$32. If you are looking for a bargain in Vehicles or Harness send for our free catalogue. FOSTER BUGGY & CART CO., 23 Pike Bld. Cincinnati, O.



Asthma The African Kola Plant, discovered in Congo, West Africa, is Nature's Sure Cure for Asthma. Cure Guaranteed or No Pay. Export Office, 1164 Broadway, New York. For Large Trial Case, FREE by Mail, address KOLA IMPORTING CO., 132 Vine St., Cincinnati, Ohio.

A GOLDEN OPPORTUNITY

To sell TREES HONESTLY and MAKE MONEY. FIRST-CLASS MEN will receive terms by addressing J. HAMMOND, Nurseryman, Geneva, N. Y.

Splendid Investment

Do you want to join a new enterprise with many Millions of Dollars worth of Raw Material as its foundation (the Raw Material referred to is better than coal or iron for the foundation of large and profitable Manufactories). The first investors get in on the

GROUND FLOOR

and secure stock at 12½ cents on the dollar, which is almost sure to increase to par in a short time and thus enable the first investors to make

700 PER CENT Profit

in a few months, and much more by holding stock longer.

This is a chance seldom offered—the one opportunity in a lifetime. One Hundred Dollars invested now will make you a profit of Seven Hundred Dollars soon. One Thousand Dollars invested now ought to make you a profit of Seven Thousand in less than a year. Don't miss this chance if you want a good thing, but write at once for full particulars to

N. S. PERRY,
Springfield, Ohio.

Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammononton, New Jersey.

INCREASING EGG PRODUCTION.

Although but little food should be given in summer, yet the hens can be fed with advantage if the feeding of fat substances or starchy foods is avoided. It requires careful judgment in feeding such foods as corn, wheat or oats in summer, as they contain too much starch, and may cause the hens to become too fat. If it is deemed necessary to give food to the hens, let it be pulverized bones or lean meat. The difficulty with lean meat is that of procuring it. There is, however, on the market, and for sale in nearly all towns, the ground meat of the rendering establishments. It is first cooked, subjected to superheated steam, and pressed until all the fat is removed. It contains a proportion of the bone, and also of the solid portions of the meat, but it also loses some of its nitrogen during the process to which it is subjected.

When feeding ground meat, it will answer the purpose to fill an empty cigar-box with it and place it where the hens can help themselves. This will be all the food that they will require if they are on a range, and they will not eat too much of it if grass and other foods are plentiful, while the result in eggs will be satisfactory. Another method of promoting egg production is to give the hens a liberal allowance of linseed-meal three times a week. A tablespoonful to each hen, mixed with bran, moistened, will prove valuable in regulating the bowels and in assisting the hens to provide egg material, but care must be used at all times not to make the hens fat. Correct feeding cannot be imparted to any one, as it is a matter of observation of the flock, each person regulating his method according to the circumstances.

TOP VENTILATION.

From the inquiries of our readers, some of whom complain that their fowls are affected with blindness and swelled eyes, we surmise that many of them use top ventilators. Ventilation is certainly necessary at this season, but drafts which come down upon the hens are injurious, even in summer, if the weather is damp. A top ventilator may be useful or not, according to the direction of the wind. The best way to ventilate a poultry-house in summer is to leave the door and windows open, but the openings should be covered with wire mosquito-netting, or half-inch wire mesh, with the roosts back from the draft. It is not injurious for fowls to be in a draft on a warm summer night, but should the wind shift to the northeast, and the air become damp, they easily become affected. If the draft comes over their heads the result is usually blindness and swollen eyes. The cracks and crevices are sometimes the sources of drafts, also. All ventilation should be under control. The top ventilator is excellent if it is opened or closed, according to the direction of the wind and the condition of the atmosphere.

LICE THE GREAT DRAWBACK.

The gravest difficulty in summer is that of lice. Unless both the hens and the house are cleaned, the matter of getting rid of lice is one that entails labor. When lice are to be destroyed, dependence should not be placed on a single attempt. If necessary, repeat the operation daily for several days. Every portion of the house should be saturated with kerosene or the kerosene emulsion. In fact, the house, yards, fences and everything should be drenched, getting the liquid well into every crack and crevice. Kerosene will kill lice, surely, and so will the emulsion. After applying it several times to the building, give the interior a liberal application of whitewash, using a gill of crude carbolic acid with each bucket of whitewash. Take each hen by the legs, head downward, and dust her well with a mixture of fine coal ashes (sifted two or three times) and Dalmatian insect-powder, by adding a pound of the powder to each gallon of ashes. Then give the hens plenty of fine ashes to dust in. Do not try this remedy once, but, as stated, repeat it two or three times, and it will be destructive to all the lice, as well as save labor afterward.

HOW MUCH FOOD TO GIVE.

A quart of corn, twice a day, to twenty hens is supposed to be an allowance, but no estimate can be arrived at, as hens will not thrive on corn alone, nor will all the hens in a flock eat alike, or prefer the same kind of food. When feeding the hens give them a variety, but never give them more than they can eat up clean. It is better to give too little than too much. In the winter the hens should have two good meals each day, but in summer one meal is ample. If they are on a range it is safe to assert that one half of the quantity supposed to be a meal will be sufficient. The poultryman must observe his flocks, and judge of their wants by the amount of forage on the range.

MOULTING HENS.

As soon as the hens begin to show nakedness, and also to commence dropping their feathers, but few eggs should be expected, as the hens will rest from their work until they take on new plumage. The sooner they put on their new attire the sooner they will begin to lay. The best food for them is lean meat, or fresh bones from the butcher, but as all oily foods hasten moulting of the feathers, a pint of linseed-meal may be added to their food daily, for twenty hens. Feed the moulting hens once a day, and give them liberty on the range.

FATTENING THE TURKEYS.

The turkey will not fatten if closely confined in a coop. For a few days it may gain in flesh, but after that length of time it will lose in weight, no matter how well fed, as it will worry and fret for liberty. The proper way to fatten the turkeys is to begin about a month before the time fixed for marketing them, and feed them early in the morning and also when they come up at night. In the morning, give them all the wheat they will eat, and at night give corn. Give them full liberty on the fields.

DUCKS FOR LAYING.

The ducks that are retained for laying will not begin to lay until about February, and in the meantime they need only be kept in moderate condition. If made too fat, it will postpone the laying period, and the eggs secured will be infertile. They should be kept on grass at this season, with a small proportion of ground grain once a day. About January begin with a feed of meat at noon, which will induce them to lay regularly.

LOSSES WILL HAPPEN.

No one ventures into poultry keeping without experiencing drawbacks of some kind. The most difficult period is the first year, as a knowledge of how to avoid mistakes is only gained by practical experience. It does not imply that one cannot succeed because failure results in the beginning. Failure sometimes proves to be a blessing in disguise, if the lessons obtained are used for guiding succeeding operations.

USE THE PURSLAINE.

Purslane (or "pursley," as it is best known) is a valuable food, and rich in nitrogen. It is difficult to destroy when it takes possession of the ground, as it will come to life when apparently dead, if rain falls on it. Now, ducks and geese are very fond of it, and even the hens like it. Rake it up with a rake and throw it to the poultry, as it will then pay something for the labor required to exterminate it.

FEEDING-COOPS FOR CHICKS.

To feed chicks so as to prevent the fowls from securing the food, make a coop, of lath, about two feet wide, four feet long and eight inches high. A few openings should be made for the ingress and egress of the chicks. When the food is placed under the coop, the chicks will be able to go under at will to secure their food, while the adults will be compelled to look on from the outside.

KEROSENE ON ROOSTS.

Do not make the roosts disagreeable for the hens, as is the case when the roosts are saturated with kerosene, which causes sore feet. Swab the roosts with kerosene, carry them outside, apply a lighted match and allow the fire to run over them. The result will be that the lice will be exterminated.

BAKERS' REFUSE.

Stale bread, crackers, cakes and such may sometimes be procured at but little outlay, and may be safely utilized for fowls, chicks or ducklings. It is not advisable to feed the refuse exclusively, however, as a variety of food is important, but it may be used in place of all kinds of grain with advantage, compared with its cost.

CORRESPONDENCE.

FREQUENT CAUSE OF SWELLED HEADS.—I have learned a great many things about almost every branch of farming from your valuable paper, especially chickens, but we have to adapt your advice to our climate. I turn my poultry out of doors in warm weather, and they are healthy and have no vermin or disease. Some readers say that their fowls have the swelled head. I think if they will examine they will find it is fox-tails in the eyes. I often get them out of my chicken's eyes, and then they get well. MRS. R. E. T. Maryville, Cal.

THE SILVER-SPANGLED HAMBURG.—Lately I have seen a great deal about the Hamburgs, and I would like to give my experience with the silver-spangled variety. This breed originated in a cross of the silver Mooney and silver Pheasant. They are a small but handsome bird, and as layers are among the foremost of the non-sitting varieties. They lay a small, white egg, and generally hatch well, but the chicks require good care, as they are not as hardy as Leghorn chicks. They bear confinement very well, but do not become fat and lazy, like the larger breeds. As a farmer's fowl they are excellent, and I will venture to say that with good care a flock of fifty Hamburgs will pay any farmer more money than three cows, considering care and feed. Amiret, Minn. P. G. E.

CHOLERA.—Much of the mortality attributed to cholera is due to filthy drinking-water. Go into the country and stop at a farm-house. Go around to the back door. By looking around a little you will, in a great many cases, see a small water-pipe stuck through the side of the house, and from this pipe, which leads from the sink, comes all the wash-water, dish-water, etc. It pours on top of the ground, and forming a little rivulet, courses along some distance to some out-of-the-way place—most likely the garden. You will observe the hens roaming about the premises stop and drink this filth. What sight is more disgusting? The hot summer sun beating down upon this stream makes it tenfold worse than it is as it comes from the sink. Then, if anything ails the fowls the owner asks: "What is the matter with my fowls? I feed them so and so; I provide clean water; they are not confined, but are allowed to roam about at their will." Now, reader, just watch your fowls. You will soon discover that they prefer slops to clean water if they have access to both. Now, remember that clean food, fine houses, etc., will not save your fowls if they do not have clean runs. They should also be kept away from the swill-tub. F. A. R. Paris, Texas.

INQUIRIES ANSWERED.

Gapes.—S. B. H., Athens, Ohio, writes: "What would you recommend for gapes?"
REPLY:—Draw the gape-worms from the windpipe with the tuft of a feather. A drop of spirits of turpentine on a bread crumb is sometimes effectual.

Blind Stagers.—H. K., Grindstone, Pa., writes: "What is the cause and cure of blind staggers?"

REPLY:—It is due to pressure of blood on the brain, and usually occurs when fowls are overfat or fed on stimulating food.

Colds.—Mrs. J. A. J., Eaton, Col., writes: "My chickens are drooping, and will not eat. They appear blind, weak and dizzy. They have no lice."

REPLY:—They have probably been exposed to drafts at nights, though it is possible that the large, gray lice are at work on the skin of the heads and necks.

Lame Turkeys.—"Subscriber" writes: "My young turkeys, two weeks old, were healthy, but are now lame. They are healthy otherwise and have good appetites."

REPLY:—It is probably due to rapid growth and high feeding. Keep them dry, and add a teaspoonful of tincture of iron to each quart of their drinking-water. It is not necessarily fatal.

Weak Hatches.—Mrs. L. W., Wapella, Iowa, writes: "The eggs from my hens are slow hatching, and a number die in the shells, while those that live are weak and delicate. They are mostly Light Brahma and common stock."

REPLY:—The difficulty is due to the hens being rather fat and highly fed on stimulating food.

Hatching.—C. G., Healdsburg, Cal., writes: "How is it that when my chicks are hatching in the incubator the shells stick and dry on the chicks? Is it because of an excess of moisture?"

REPLY:—You should have given details of your management, such as temperature, moisture, etc., in order to enable us to reply. The probability is that you used too much moisture and insufficient heat.

Ducks Drooping.—C. W. D., Hudson, Mich., writes: "My ducks droop and will not eat. They are weak, and stagger. It affects old and young."

REPLY:—It is perhaps due to damp quarters

or crowding. Keep them on a board floor at night and place them on a new location, as they will eat fifth if too closely confined. Give plenty of chopped green food, especially clover.

White on Brown Leghorns.—E. C. B., Petrolia, Pa., writes: "I purchased two sittings of eggs from a breeder. The chicks are four weeks old, and their wings are white for half an inch from the tips. Are they pure?"

REPLY:—There should be no white, or partly white, feathers on Brown Leghorns when matured, but chicks sometimes show portions of white, which passes away as they grow.

Line-Difficulties with Chicks.—"Subscriber," Corvallis, Oregon, writes: "If there is no lime in the water, what do you suggest?—My eight-weeks-old chicks go entirely blind, with a wart-like substance over the eye. The nights are cold here."

REPLY:—Nothing is required in the drinking-water. Feed ground bone and a variety of food.—The difficulty is due to cold drafts over the chicks at night, probably from a top ventilator. Anoint the eyes with glycerine.

Ducks.—R. E. S., Bradshaw, Neb., writes: "1. Which breed of ducks is the hardest when young? 2. How should ducklings be fed and managed the first month or two?"

REPLY:—1. There is but little difference in the hardiness of breeds, but probably the Pekins are equal to other breeds in that respect. 2. Keep the ducklings dry. Give plenty of drinking-water. Feed cooked turnips or potatoes, thickened with bran and corn-meal, four times a day, allowing, also, finely-chopped clover, scalded. Give a variety of any kind of food that they will eat.

Pip.—C. E. K., Greenport, N. Y., writes: "My hens have been troubled with what is here called 'pip.' I got rid of them, and this spring procured a new flock—Light Brahmas—and some of them show the same symptoms."

REPLY:—What is termed "pip" is a form of roup. Your premises should be thoroughly cleaned and disinfected, the yards, houses, etc., saturated with a solution of one pound of copperas in six gallons of boiling water. It may be that the poultry-house permits of drafts on the hens at night, as is usual with top ventilators, which should be avoided.

Mites.—Mrs. S. A. T., Kingsville, Ark., writes: "How can I get rid of mites in my poultry-house? They became so numerous that I built a new one, but to my surprise I find millions in it. I have used cleanliness, and every precaution, and endeavored to destroy them with kerosene and by the burning of hay in the house."

REPLY:—The cheapest mode of getting rid of mites is to use the kerosene emulsion, which is made by dissolving one pound of soap in two gallons of boiling water. Remove the boiling water from the fire and add three gallons of kerosene, and while so doing, briskly agitate the mixture for ten minutes; next, add ten gallons of water. Spray or sprinkle the mixture over every portion of the poultry-house, until the roof (inside and outside), walls, floors, etc., are thoroughly saturated, not omitting cracks and crevices.

UNLIKE ANY OTHER JOHNSON'S ANODYNE LINIMENT

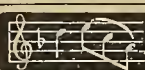
For Internal and External Use.

Stops Pain, Cures Croup, Inflammation in body or limb, like magic. Cures Croup, Asthma, Colds, Catarrh, Lame back, Stiff Joints and Strains. Full particulars free. Price, post-paid, 35 cts. I. S. JOHNSON & CO., Boston, Mass.

128-PAGE POULTRY BOOK
contains over 75,000 words, 60 illustrations, all you want to know about raising and breeding all kinds of FINE POULTRY. By mail for 12 cts. CLARENCE C. DEPUY, Pub. Syracuse, N. Y.

OHIO NORMAL UNIVERSITY

THOROUGH, PRACTICAL, ECONOMICAL.
Last annual enrollment 2,950 students. Sustains ten Departments. Students can enter at any time and be accommodated with suitable classes. No vacation except holiday week. U. S. Military Department connected with school. Drill optional. Extensive and well selected library. Good board, neatly furnished room and tuition, ten weeks, \$28; forty weeks, \$100; fifty-one weeks, \$122. Room and board in private families. Text books rented at minimum rates. First Fall term begins August 9th. Send for Catalogue. H. S. LEHR, A. M., President, ADA, OHIO.



Howell's New Organ and Piano Charts teach to play by letter, by chord, and sing by note. Set, complete, 60 cts., formerly \$2. Address C. G. HOWELL, Battle Creek, Mich.

If afflicted with sore eyes use **Dr. Thompson's Eye-Water**

Any of our readers who may be out of employment or are in any business that is not bringing them in good profits should order an outfit of our picture, "Columbus at the Royal Court of Spain," and change their condition for the better. It is the best money-making business of the times. Two agents worked only eight hours and sold 52 pictures. This means for them over \$50.00 clear profit. Are you making more than that in that time? One lady received her outfit and sold 5 the first hour. \$5.00 an hour is certainly fair wages. See our descriptive offer in the issue of July 1st and enter the field yourself. Also see our offer on page 11.

Our Fireside.

SYMPATHY.

They came to me and gently said,
"Your neighbor's little one lies dead."
I answered not, but closer pressed
My own wee one unto my breast.
I laid him down, my eyes grew dim,
And once again I bent o'er him;
Then out I softly, quickly stole,
The other mother to console.
I clasped her hand, and tried—but no,
I could not say 'twas better so;
I could not say, dear heart, resign—
Oh, Father, what if it were mine!

—Kathleen Kavanagh.

THE STORY OF A DREAM.

FORSAKEN by luck, pluck, friends, faith and hope; without work, money or credit, and in a strange city. There was nothing between me and starvation but a pad of paper and a pencil; yet I could not write. I sat alone, in that desolate, midnight room—rain everywhere without—drearly deserted. Again and again I sought to put a thought on paper, only to utterly fail. A horribly fatal, bloody thought entered my head. I shuddered slightly, and a memory of my mother came over me like a spell. Laying my head upon the table, I cried like a good fellow. How long I sat there I do not know. I know that I fell asleep, and heard my mother singing as she used to sing by my bedside in childhood. Then the room seemed stifling, and a hot flush burned my brain. In my dream I was in the old home, writing, my pen dashing over the paper like a stream of fire, thought following thought in words that I felt were chaste, and imagery that I knew was as vivid as life. Faster and faster flamed the thoughts. Faster and faster flew the pen. Bravely and well that dream story told itself to me:

Grisly mountain stretches on either hand, rolling back to the grim sky under somber pines and scrubby oaks. A narrow, treacherous stream writhing and seething over its ugly sands, red from the wash of the placers above. On the bank a little child, playing in the silent rays of the setting sun. A little, half-starved, god-forsaken baby, product of a mining town, born of a merciless mother to a faithless father. Singing a baby tune of its own, it tracks the sandy shore with its little bare feet, squealing with delight as the splashing water swirls around its thin, bare legs. Then another cry, sharp and scared, as its feet seem held, and in spite of all its struggles, go down, down, down into the treacherous depths of a quicksand, pitiless, remorseless, ravenous and insatiable.

Pitifully wails the little one; but the blue hills are still. Again and again the pleading cry trembles on the chilly wind from the ravines. Then through the silence comes a crash in the brush, and across the broad, low sands darts a miner, far from camp, and no hero in his ragged, dirty flannel. Into the sand he runs, for the baby is already arm-pit deep, and pitiful in its fright.

"Out you come," he cries, cheerily, "and up you go, Polly!" he laughs, as far up the bank, into a pile of soft, drifted grass, he tosses the now merrily chattering youngster. Then he turns to the shore with a smile. But the smile fades like a shadow, for the sand has crept to his boot-tops and the water is wriggling about his knees. He has delayed too long. His weight, greater than that of the child, has trapped him upon his errand of mercy. One instant he pauses in dismay. Then he throws himself on his side, and tries to free his feet from the snaky sands. Once, twice, thrice he struggles, but each effort leaves him weaker than before. A look of despair blanches his face. His eyes rove up and down the deserted bank; too well he knows in vain. Far from camp, night at hand, and none to hear but little Polly, calling to him from the bank to take her home.

"Run, kid, run! Run to camp and tell the boys that Snider's in the sands!"

Away speeds the little one on her mad, hopeless errand. Up come the sands, shivering, shaking, squirming around the solitary figure. Fast, fast and ever faster in the deathly silence. Around his waist, around his chest, around his brawny arms. Then the look of a soul in its last agony contorts his bronzed face as the water steals over his shoulders.

The sand oozes and bubbles close and closer to its prey. One moment more and all will be over. A bubble of foam eddies around his chin. A splash of water laps his lips as he throws his strong head far back and looks calmly up into the sky, through the glory of the setting sun, which he shall never see again. He has no friends, no home, no ties to bind him to the world but life, and yet that bitter mockery grows dear. Across the hopeless face comes a holy peace in resignation to the end which is at hand. A fire flames in the cold, gray eyes; the blue lips open, and in a voice that would touch a heart of stone, rings out one verse, a verse of the hymn his mother sang by his bedside, ah, so many years ago.

Then a splash, a bubbling gasp, and all is over, forever.

But the great hills ring with the hymn that Snider sang; and it will echo there till the great day comes.

I woke with a start. The clock was striking three. The fire was out, and I was chilled through. With a great pang, I remembered the undone work I had to do and turned to my table. There, on the paper that I had left blank three hours before, was written the story I have told, complete from first to last.

The story of a dream.—*Cincinnati Commercial Gazette.*

DOLORES' BABY.

The mountains are growing more and more purple, and the sun is sinking behind them, making the clouds, oh, so lovely! But I am not looking at the clouds, neither at the mountains, but at Dolores' baby, while she, poor girl, looks at nothing, seemingly, though her face is ever turned toward the track, as it winds southward, and finally is caught between two mountains that seem to come together, holding it like a vise.

Dolores' face is ever turned that way now, looking for that lover husband, who left her after such a brief honeymoon, and has been heard from no more.

I know the father and mother and brother are within the old adobe house, eating their tortillas and drinking their black coffee; but she cares not for supper. Yes, and young Brigida is there, too. She will go to the dance to-night with Pedro, who used only to take Dolores.

But she cares not for that, either. Her black hair is no longer neatly braided and crossed back and forth on her neck, looking like a mass of braided satin, but hangs unbound way below her waist, and her beautiful dark eyes are heavy with weeping. Her shawl has slipped off her head down from her shoulders, and is lying between her and the child. She has sat there the whole afternoon, and I have made up my mind that she will certainly starve the child to death, when it wakes, opens its great black eyes and sets up such a cry that she becomes conscious of it at last, and takes it tenderly in her arms, and is pressing it to her breast and smoothing its soft, yellow hair (like its father's) and calling it all the endearing names known to a Mexican mother, and they are many. Presently the light is gone, and I can see Dolores and her baby no more. But I know she is still leaning against the old adobe walls, and still has her face turned toward the south. Lights are gleaming out from the open doors of the adobe houses all over the little village, and now, up on the side of the mountain back of us I hear the tinkle of a guitar; then a violin. Yes, they are dancing now. I can plainly see the forms flitting through the Spanish quadrille. What good time they keep. No need of a prompter—everyone knows his part too well for that.

One little year ago Dolores was the belle of every festive gathering, and Pedro would dance with no one else. Now they all look on her with scorn, for she has wedded an "Americano," and he, after a few brief months, has left her, gone as he came, with the new railroad, promising to return soon; but he has not done so, and the light has all died out of her life, even as it has died out of the western sky, leaving thick darkness. Summer is passed, and autumn is tinging the clinging vines with all their gorgeous colors, making the old pines look darker and more solemn. Dolores still sits in the sun, with her baby by her side. The querulous old mother inside is scolding—praying—as she works, sometimes breaking out in some plaintive song, but as for Dolores, she sings no more; the pretty little guitar has grown dusty and its strings are broken.

Now the days are getting cold, and I see her no more, sitting in the sunshine, her black shawl wrapped around her head, and her little brown hand caressing the golden hair of her boy.

At last they tell me they have sent for the priest, for Dolores is dying; so says the mother as I enter the room. In one corner is the shrine, and on it "Our lady of tears," Dolores' own patron saint, decked out in all the finery the poor girl could gather or make. The priest has gone; he has given her final absolution, though she may not die yet. I see no need of her dying, and so I tell her old mother, but she shakes her head, and says it is better so, and so says the poor girl herself. But the baby—it will soon go too, and she uncovers the sleeping child by her side. Poor little thing, how frightfully thin it has grown, starving, I do believe, and I take it up gently, and carry it off with me.

But there was a happier ending for this little story, for as I sat by my little fireplace, the baby fed, and contentedly sleeping on my lap, who should come to my door that very evening but the lost "Americano," looking pale and thin, but clothed, and in his right mind and anxiously inquiring for his wife. I made him come in, and showed him his boy, who awoke and looked knowingly at the bright cedar fire, while his father told his brief story. He had been sick in the hospital at Santa Fe, and the Sisters were so kind to him; but he had been ill so long, and no word from his Dolores. Why did he not write? Sure he did, and often; but no word in answer. "And did you write in Spanish?" Why, no, he had not, and not one person understanding English at the post-office. "Oh, you blundering Irish

boy! No wonder she never got them." But I hurried him over to the old adobe, and for a picture of perfect happiness, you should have seen Dolores as I saw her half an hour afterward, when I followed him over there, leaning on her husband's breast. No talk of dylug now; no, indeed!

The sun is again setting behind the purple hills, and again I see Dolores sitting by the old adobe walls; but this time her guitar is in her lap, and she is singing a soft love-song to her husband, who is near, and between them is Dolores' baby.

JIM WASN'T IN IT.

The gown was checked silk, blue and white, and trimmed with bias bands of plain blue. It was slashed, and boned, and plaited, and puffed and ruffled; so queer and fussy-looking was it that the little lady laughed outright as she shook out the creases and held it up to the light. The garment had been lying for years at the bottom of the trunk where she had just found it. It was her first silk gown, and all those funny, foolish-looking trimmings had been in style ten years before.

She had been seventeen then, and now she was twenty-seven. Ten years ago she had worn it. She wondered if she could get it on now.

Quickly she slipped off her pretty wrapper and got herself into the queer old silk. It was tight across the bust and very large at the armholes, and it gave her a lank, gawky look. The skirt was several inches too short and there was a deal of surplus fullness at the back of the waist, which had been made to accommodate a bustle.

The little lady pranced about before the mirror. How ridiculous it looked. It would amuse Jim. She would keep it on until he came home, and show him how she used to look before she knew him.

She glanced at the clock. It was an hour before Jim would come, so she took a book and sat down in an easy chair before the grate.

Somehow she could not put her mind on the story. Her eyes kept roving to the shining silk, and she smoothed the soft folds gently with her fingers. She was thinking of the first time that she wore the dress. What an age ago it was—long before she heard of Jim. Suddenly her hand struck something sharp and hard. It was a letter in the pocket, a worn envelope with the edges of a tintype pricking through the paper. Carefully she drew it out from among the puffs and folds. It was addressed to her—her maiden name—written in a round, boyish hand, with queer, curly capitals and a funny letter "e."

She slipped the picture out from the envelope. It showed a handsome blonde boy of about seventeen, with a roguish, laughing face; and folded about the picture was a note: "I thought you might be lonesome, so I send you this picture to cheer you and to remind you of that cigarette you smoked."

The lady had not forgotten how the note and picture had been smuggled into the strictest of girls' schools. Her playmate and boy sweetheart had once dared her to smoke a cigarette, and she had done it. Oh, how ill and ashamed she had been, and how he had teased her. It all came back to her now, and the demure little matron blushed to her ears as she thought of it.

Quickly she tore the note across, and tossed it in the grate, but she kept the picture, and she looked at it a long, long time. Then she put it back in the pocket, and took off the queer gown, and laid it away just where she had found it at the bottom of her trunk.

When Jim came home she was dressed in a pretty tailor-made gown; and as he took her face in his hands to kiss her, he said:

"Why, girlie, what's up? You've been crying."

And she laughed as she answered:

"Why, Jim, how perfectly absurd!"

NAMES OF STATES.

Maine takes its name from the province of Main, in France, and was so called as a compliment to the queen of Charles I, Henrietta, who was its owner.

New Hampshire takes its name from Hampshire, England. New Hampshire was originally called Laconia.

Vermont is French (verd mont), signifying green mountain.

Massachusetts is an Indian word, signifying "country about the great hills."

Rhode Island gets its name because of its fancied resemblance to the island of Rhodes, in the Mediterranean.

The real name of Connecticut is Quon-eh-tabut. It is a Mohegan word, and means "long river."

New York was so named as a compliment to the duke of York, whose brother, Charles II, granted him that territory.

New Jersey was named for Sir George Carter, who was at that time governor of the Island of Jersey, in the British channel.

Pennsylvania, as is generally known, takes its name from William Penn; the "sylvania" part of it means woods. Literally it is "Penn's woods."

Delaware derives its name from Thomas West, Lord de la Ware.

Maryland was named in honor of Henrietta Maria, queen of Charles I.

Virginia got its name from Queen Elizabeth, the "Virgin Queen."

The Carolinas were named for Charles (Carolus) II.

MEANINGS WORTH REMEMBERING.

Florida gets its name from Kanuwas de Flores, or "Feast of the Flowers."

Alabama comes from a Greek word, and signifies "Land of Rest."

Louisiana was so named in honor of Louis XIV.

Mississippi is a Natchez word, and means "Father of Waters."

Three or four Indian interpretations have been given for the word Arkansas, the best being that it signifies "Smoky Waters," the French prefix "Ark" meaning bow.

Tennessee, according to some writers, is from Tenasea, an Indian chief; others have it that it means "River of the Big Bend."

Kentucky does not mean "Dark and Bloody Ground," but is derived from the Indian word "Kain-tuk-ae," signifying "Land at the head of the River."

Ohio has had several meanings fitted to it. Some say that it is a Suwanee word meaning "The Beautiful River." Others refer to the Wyandotte word, Oheza, which signifies "Something Great."

Indiana means land of Indians.

Illinois is supposed to be derived from an Indian word, which was intended to refer to a superior class of men.

Wisconsin is an Indian word, meaning "Wild, Rushing Waters."

Missouri means "Muddy Waters."

Michigan is from an Indian word, meaning "Great Lake."

The name Kansas is based on the same as that of Arkansas.

A VALUABLE LIST.

Iowa is named from an Indian tribe, the Kiowas; the Kiowas were so called by the Illinois Indians because they were "across the river."

The name of California is a matter of much dispute. Some writers say it first appeared in a Spanish romance of 1530, the heroine being an Amazonian named "California."

Colorado is a Spanish word, applied to that portion of the Rocky mountains on account of its many colored peaks.

Nebraska means shallow waters.

Nevada is a Spanish word, signifying "snow-covered mountains."

Georgia had its name bestowed when it was a colony, in honor of George II.

The Spanish missionaries of 1524 called the country now known as Texas "Mictcapah," and the people Mictecas. From this last word the name of Texas is supposed to have been derived.

Oregon is a Spanish word, signifying "vales of wild thyme."

Dakota means "leagued" or "allied tribes."

Wyoming is the Indian word for "Big Plains."

Washington gets its name from our first president.

Montana means mountainous.

Idaho is a name that has never been satisfactorily accounted for.—*St. Louis Republic.*

TO MAKE TEA.

The delicate leaf of tea should never touch metal. It should be kept in paper, wood, glass or porcelain. To make it, put a small quantity in a porcelain cup, fill the latter with boiling water, cover it with a porcelain saucer, and let it stand three minutes.

Then, if you desire to be an epicure, drink only the upper layer of the golden liquid, throw the rest away, rinse the cup, and begin drawing *de novo*. Never use sugar any more than you would sweeten Chamberlain or pour molasses into Mumm's extra dry. Do not use milk. It ruins the flavor of the tea, and the combination injures the stomach.

Above all things, do not boil tea. The heat drives off the perfume, spoils the flavor, and extracts the tannin, the astringent principle. If the boiling be done in a tin or iron pot, the tannin attacks the metal and makes the liquid black.

Never let the tea stand except in a tightly closed porcelain pot. Standing changes it from a delicious, wholesome beverage into an ill-tasting and bitter liquor. Better make it in small quantities, and make it often. In summer, sip the tea boiling hot, with a slice of previously peeled lemon, or, nicer still, of orange without the rind, floating in it.

Beware of green tea. It is the unripe leaf, and bears the same relation to the real article that the green does to the ripe peach. The green tea of commerce derives its color from being cured, or rather killed, on dirty copper pans, from being mixed with weeds and shrubs, from being stained with indigo and chrome yellow, from being colored with verdigris, grass juice or chlorophyll.—*From Consul Bedloe's Report to the State Department.*

For Rheumatism

sciatica,
rheumatic gout,
neuralgia, dropsy, and
white swelling,
use

Ayer's Sarsaparilla
Cures others, will cure you

STORY OF THE "SWEDISH WEDDING MARCH."

In American homes throughout the land the "Swedish Wedding March," by Soderman, is played with more or less skill on the piano; it rings through churches in mighty waves of solemn sound from the many-voiced organ; even nolsy orchestrions render it with automatic precision. So familiar has the "Wedding March" become that it seems almost hackneyed. Yet few people know the pretty love story of historical interest connected with the quaint, old-fashioned tune. If they knew, the first bars of the music would conjure up before their mind's eye a delightful picture of mediæval pageantry, such as any American traveler who is a student of Scandinavian languages and literature might enjoy in the Royal Dramatic theater, in Stockholm, Sweden, when the "Wedding at Ulfasa" is on the play-list.

In a beautiful versified drama the Swedish poet, Frans Hedberg, revives the true love story of a noble couple who lived, loved and died six hundred years ago. At the close of the drama the wedding procession is invariably ushered in to the tune of Soderman's march, with life and drums and horns and the gorgeous display of mediæval costumes.

The old mansion of Ulfasa, where the wedding took place so many hundred years ago, still stands erect, and is pointed out to tourists passing through the Gota canal in Sweden. In those dark ages unprotected maidens were often captured and carried off by unprincipled rovers, who considered women at large their legitimate prey, to be hunted down and appropriated like squirrels and wild rabbits.

Thus it happened once that a gallant young nobleman on a ride across country overtook a highwayman who had just seized a maiden on her way from mass. The scoundrel was defeated, and the hero escorted the lady home to her parents.

No wonder the timid, blue-eyed, yellow-haired girl, first half scared to death by a ruthless robber, and then providentially rescued by a gallant knight, looked at her escort with great devotion, akin to worship. No wonder the young knight with the strong arm lost his heart during the ride through the snowy woods on that Sabbath day in the far-off ages. All the elements of a romance were there, and the result was the old, old, and ever-new story.

Who were they? His name was Bengt, and he was a judge, with the power of a governor, appointed by his elder brother, at the helm of the Swedish government, the wise Earl Birger, of mediæval fame in the North, because he protected the church and enforced respect for Swedish homes and Swedish women. For this reason all womankind in northern Europe cherishes the memory of good Birger Yarl, who gave the law that daughters should inherit as well as sons. Their portion was to be half as large as the brothers' share, which was an improvement on the former state of affairs, when girls were excluded from all inheritance, while the boys in a family took all the property when the parents died.

And who was the maiden rescued by Birger Yarl's brother Bengt? Her name was Sigrid, and she was fair, so fair that history treasures her name as "Sigrid the Fair." Partiality in a judge is a grave fault; yet it is recorded that Judge Bengt gave evidence of being partial in the case of a young lady. After a happy time of courtship the wedding-day was fixed, and messengers were dispatched to the mighty earl to invite him cordially to the wedding. Sigrid and her parents were anxious to learn if the earl received the news of the engagement favorably, while the happy lover had no doubt whatever that everything would run smoothly, and that his brother and the rest of the world considered his choice most creditable.

Old Birger Yarl received the news cautiously. He cross-questioned the messengers, and found out that the bride, though fair of face and name, was poor, and of a family far below his own in rank. The proud man frowned. "Ill-mated match; disgraceful union!" he muttered. How dared his brother offer him the insult of an invitation to such a beggarly wedding? "If he neglects his dignity so far as to marry below his station, he shall feel my displeasure. And as for the wench who ensnared him, my gift to her shall tell what is in my mind."

The heralds returned crestfallen, carrying a carved casket, with Birger Yarl's mysterious wedding present for Sigrid. Solemnly she received the casket, not knowing how to interpret the messengers' gloomy faces. The lid was opened. Inside lay the folds of a garment of costly purple cloth trimmed with snow-white ermine, fit for the drapery of a queen. With a cry of delight Sigrid drew the mantle out of the casket, and with a cry of disappointment she dropped it to the ground. She turned pale, staggered to a seat, leaned her head on an oak table, and wept the bitterest tears of her young life. What was it she had seen? Simply this: Birger Yarl's gift was a mantle of peculiar make; one half of it was of regal purple and the other half of it was of the coarsest, yellow, homespun wool. The intended meaning had instantly flashed upon Sigrid's mind. Birger Yarl, in his wounded pride, wanted her to understand that there was as offensive a contrast between her low station and her lover's rank as between the two halves of the mantle. It was a bitter slight, a cruel insult, from a high and

mighty mau. He, the friend of every defenseless woman in the country, the man of noble purpose and feeling heart, showed himself resentful and narrow-minded within the small circle of his kin when his vanity was hurt. He despised her; he reproached her love that this union was degradation to himself.

Poor girl! She was broken-hearted for a while. She resolved to give up her claim, to set him free, not to stand in his way, but to hide her love for him from the wicked world behind the convent walls.

No, not yet. She would not give him up without a struggle. Her proud spirit awoke, she brushed away her tears, and all of a sudden an arch smile dimpled her cheeks. She looked like one inspired with new life. There was fire in her blue eye. What had she done to be insulted? Nothing. Her father was poor, but there was no stain on his shield. If the noble Yarl chose to slight a maiden of good name who had done him no harm, she in her turn would send him a reply.

"Help me, girls," she called out to her former playmates. "Come, all of you, let us give the great Yarl a lesson with our nimble fingers. Here are silks and yarns, gold cords and gaudy beads. Here, too, is my necklace of gleaming pearls, my only jewel, an heirloom. We will brighten up this homely homespun web until it outshines the purple and ermine."

Before the curfew of Sabbath eve rang in a day's rest, the work was done. Behold! the mantle was transformed. The coarse homespun was no longer visible. It was hidden under the most delicate design in skilful embroidery, ablaze with gorgeous colors, sparkling with jewels, gleaming with a golden sheen. Plain and commonplace did the purple and ermine look beside this marvel of patient maidens' work.

The mantle was folded and laid in the carved casket, and with a smile of proud satisfaction the fair Sigrid confided it to the messenger.

"Deliver this casket to the Yarl."

"What shall the message be?"

"None. The Yarl will know. The Yarl will understand."

The Yarl did understand the meaning of the adorned homespun web. Did he wax wroth? Not at all. He looked surprised, of course, when he unpacked the mantle, but presently he smiled and stroked his iron-gray beard.

"Sigrid the Fair. Poor, yes, but of good repute. What more? Wise, very wise, and spirited. Ah, brother Bengt, I might have known you would not choose merely a pretty fool. H'm! I like her answer. I think I will go and see my kinswoman that is to be. Sigrid the Fair, Sigrid the Proud!"

And without delay the old earl commanded his followers to get ready for the journey with the pomp due to his rank and wealth, and provided with magnificent gifts for the bride.

They journeyed on horseback, and came just in time for the wedding at Ulfasa mansion.

Fair indeed was the bride, issuing from her maiden bower, with the silver crown on her yellow hair. When she saw the venerable figure of the earl approach, her heart sank within her; her color came and went like the play of northern light on the frost-bound earth; her blue eyes met his with the timid gaze of a helpless child, suddenly changing to the dignified, steady look of a woman with a clear conscience. At first sight the Yarl's heart softened towards her as a snow-drift melts in the warm spring sun. Hark, the faint strains of the wedding march are heard, like a far-off echo.

"All hail, sister!" he said, with his right hand extended to grasp hers.

"Did you say—sister?" she whispered, with tear-dimmed eyes raised to the stern, bearded face of the mighty earl.

"Yes. God bless you, sister. Brother Bengt, take good care of her," exclaimed Birger Yarl, with his deep, ringing voice.

Nearer and nearer flits the merry wedding march, and Sigrid the Fair turns from her kinsman to her faithful lover, who never had wavered, leaned her crowned head on his shoulder, and wept for joy.

Only one moment, for now the drummer-boys and the fife appear on the scene playing noisily, merrily. Followed by the stately wedding procession, the bridal couple and the mighty earl wend their way to church, and pass out of sight. The melody grows fainter and finally dies away in the distance, sounding merely like the whistle of the wind in the Swedish pines.

History drops Sigrid the Fair and her husband, Bengt, the judge, at the threshold of wedded life. Married couples, like nations, are happiest when history or the world forgets to keep a record of their doings. Thus there is reason to believe the noble Swedish lovers remained happy to their dying day.—Harper's Bazar.

SHORT AND SWEET

Extracts from the many pleasing testimonials sent us by persons who have received a copy of the picture, "Columbus at the Royal Court of Spain," framed in our Grand 6-inch gold frame.

"I received the picture and am well pleased with it. Took five orders the first hour. * * * The frame alone is worth \$5.00. * * *

"It is the best selling article I have ever handled. * * * Send me more order books. I have worked 9½ days and have taken 85 orders. * * *

"We received the picture in good order. If it will strike others as it does us it will be in every home. * * * I think your picture and frame are the finest I have ever seen."

"I received the picture and think it is perfectly splendid, and far beyond my expectation. * * *

"It is simply superb in its grand and striking appearance; have canvassed one day and taken eleven orders. * * *

"They are very elegant pictures, far superior to what I expected. Your circulars do not praise them too highly. I am delighted with the frame. * * *

"I started out to-day for the first time and sold 10 pictures, and am going to keep at it and try for that world's fair trip. It is the best thing to sell I ever handled. See the offer on page 11."

AN EASY WAY OF WASHING CLOTHES.

A Trial Package Free

Frank Siddall's Soap

A Trial Package Free

It is GUARANTEED to cut down the labor on wash-day so that a delicate woman or young girl can do a large wash without being tired; and makes the clothes clean, sweet and white without boiling or scalding, and WITHOUT INJURY to the most delicate fabric.

THE FUEL SAVED ON WASH-DAY PAYS FOR THE SOAP

It Does Away With The Wash-boiler Nuisance.

THESE ARE THE DIRECTIONS:

- First—Put the clothes in a tub of warm water, rub the soap on them one by one and let them lie in the water for at least 20 minutes.
- Second—After they have soaked the 20 minutes, rub out on the wash-board in the usual manner and the dirt will be found to actually drop out with less than half the usual rubbing.
- Third—Rub them lightly on the wash-board through a clean rinse water—this will take out the dirty suds. (No other rinsing to be done.)
- Fourth—Then put them through a Blue water and hang up to dry without Boiling or Scalding a Single Article, no matter how soiled some of them may have been.



LADIES, TELL YOUR FRIENDS—
CHILDREN, COAX YOUR MOTHERS—
HUSBANDS, URGE YOUR WIVES—

To let the wash-boiler stay in the closet next wash-day and give one fair, honest trial to the Frank Siddall's way of washing clothes—after one fair trial a house-keeper will never go back to the old, hard, slavish way.

TRIAL PACKAGE FREE

Make the following promises and a trial package will be delivered to you by mail absolutely free. The promises must be plainly made or the soap will not be sent.

Write a postal card like this, filling in the blanks with your name and post-office address, and also your neighbor's name.

I promise to use Frank Siddall's soap, if sent free, on the whole of my family wash, EXACTLY BY THE DIRECTIONS, the first wash-day after I receive it.

Name.....

Post-Office.....

County.....

State.....

My neighbor, Mrs..... has promised that she will come and see the washing done.

Just think! Clothes washed clean, sweet and white in LUKEWARM WATER and hung out to dry WITHOUT BOILING or SCALDING a single piece! Heat the washwater in a TEA-KETTLE and follow every little direction. Tell all your neighbors and friends to send to us for it. It will cost them nothing provided they make the promises.

In order that our subscribers may know that this offer is genuine, and because we want the women to learn this easy way of washing, we have agreed that the postals may be sent to us, and we will see that the soap is sent just as promised, and hope that many thousands of our subscribers will avail themselves of this generous offer at once.

Write your postal card as above and address it to

Publishers FARM AND FIRESIDE, Springfield, Ohio.

Our Household.

WAIT FO' DE TU'N OB DE TIDE.

S. Q. LAPIUS.

W'en you's hopelessly battlin' de outflowin' stream,

An' de sweat stan's in beads on yo' brow,
Ef in spite 'ob yo' strenk you's a-driftin',
't'ould seem,

W'ile de foam's hissin' white at de bow;
Den yo' bes' to steeh straight fo' de sheltahin' shoh

Dat looms up froo de mist at yo' side,
Kase dah's no use to blistah yo' han's at de oah—

Bettah wait fo' de tu'n ob de tide.

You's a-ploddin' erlong froo de dus' an' de heat
Wid de sun blazin' hot in de skies,

An' de grabel so hot dat it blistahs yo' feet,
W'ile de win' blows de san' in yo' eyes,
W'en Sam Johnsing comes dribin' a-pas' wid his mool,

In his sassy and inselent pride,
But it's no use to ack like a nenvious fool—
Jes yo' wait fo' de tu'n ob de tide.

Ef de gal w'at you's 'tendin' to wed in de fall
Runs erway wid some lop-sided chap,

W'y, dah's no use to sulk an' to blustah at all,
Let 'er know dat yo' don't keer a snap;
Show de people yo' feelin's hab nebah been teched,

An' look out fo' a hansomah bride,
Fo' dah's fish in de sea good as ebah was ketched—

Ef yo'll wait fo' de tu'n ob de tide.

Bettah res' tell de sto'm ob contention done cease—

Dough it grin's you to helplessly wait—
An' contentedly 'bide in de eddy of peace,
Dan to wrassel de billers ob fate;
Kase de y'yage ob life am obleeged to go wrong

W'en de will ob de Lawd ain defied,
But success'll be crownin' de weak wid de strong—

Ef dey wait fo' de tu'n ob de tide.

HOME TOPICS.

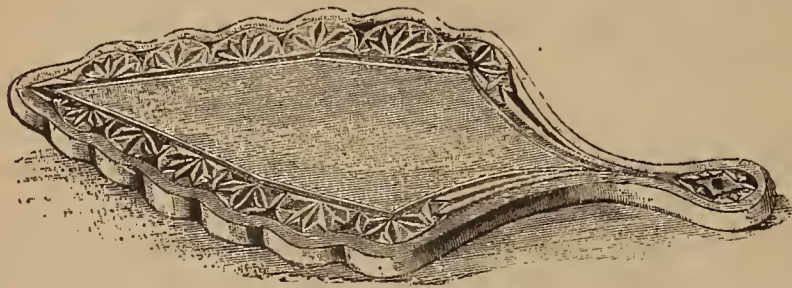


GASOLINE-STOVES.—If every housekeeper knew what a comfort a gasoline-stove is in hot weather, they would sacrifice many other things, if necessary, to possess such a treasure. If you have a large house it is a comfort to have the room

where cooking and other work must be done, cool and comfortable. If the house is small, and one room must answer the purpose of both dining-room and kitchen, a gasoline-stove will add just that much more to the comfort of the household. Not only do they save heat, but the work of cooking is lessened. They are of a convenient height to prevent stooping, and there is no heavy fuel to bring in and no ashes to carry out. They are not expensive, either in first cost or for gasoline. As soon as you are through with the fire, it is turned off and there is no waste of fuel, and in a very few minutes after the fire is out the heat is gone. A steam cooker is very nice with a gasoline-stove, as with that a whole dinner may be cooked over one burner.

With a gasoline-stove for cooking and ironing and Frank Siddall's cold-water soap for washing, hot-weather housekeeping is shorn of terrors.

If it is not possible to afford a gasoline-stove, then get a Florence oil-stove; even the little Florence lamp-stove, which can be bought for sixty cents, will boil the tea-kettle for tea or coffee at supper-time, and is a perfect treasure in canning, preserving of jelly-making. Turn a box on the side, out under a shady tree, and set your stove in it, so it will be sheltered from the wind. Here you can prepare your



WOODEN BREAD-PLATTER.

fruit and put it up in comfort. Set your stove on a stool or box, to bring it up to a convenient height.

OUT-OF-DOOR SUPPERS.—Have you ever tried, once in a while in hot weather, having supper out of doors in picnic fashion? It breaks the monotony, and the children consider it a great treat, especially if they

are allowed to help prepare for it and then wait on papa and mamma. A friend of mine who lives out on the western prairies, where for the first few years it was three miles to the nearest tree, says she does not know how they could have endured it if they had not, about once a week, packed their supper in a basket, drove to the grove by the river and there ate their supper. With her little oil-stove she made coffee for the "gude mon," and a jug of milk was carried for the rest. Then a rest under the trees and a ride home in the cool dusk of evening refreshed them for another week's work. These out-of-door suppers should be made as different from the every-day home supper as possible. Use as few dishes as you can. If you do not happen to have cold meat for sandwiches, boil some eggs hard, chop them fine and mix them with melted butter, salt and pepper. Cut the bread in thin slices, spread thinly with butter and then with the egg mixture, and put two together. If cheese is liked, add a tablespoonful of grated cheese to each egg and mix well. This mixture is nice spread on crackers and put two together. Graham crackers, put two together with jam between, are especially liked by the little folks. Try these little outings, if you do not go farther than the orchard or a shady corner of the yard. Women, even in the country, live too much indoors, and much of the weariness of work comes from its monotony. Spend all the time you can out of doors. Have a back porch to your house if you cannot have a front one; so much work can be done there with more comfort than in the house. If possible, have a porch both back and front, be it ever so rustic. If you haven't a hammock, get a club of six for FARM AND FIRESIDE or the LADIES HOME COMPANION, and you can have a nice hammock free. Swing it in a shady corner of the porch, and, believe me, it will be a comfort to every member of the family. A pillow-stuffed with new-made hay is nice for a hammock. Pillows filled with dried clover-blossoms are popular now, and take the place of the fir pillow. They are fragrant and pleasant.

MAIDA MCL.

CAMPING OUT.

KATE KAUFFMAN.

"Under the greenwood tree
Who loves to lie with me,
And tune his merry note
Unto the sweet bird's throat,
Come hither, come hither, come hither!"

So sang Amiens the gay, who accompanied his duke into exile in the forest of Arden, and for encore he continued:

"Who doth ambition shun,
And loves to lie i' the sun,
Seeking the food he eats
And pleased with what he gets,
Come hither, come hither, come hither!"

In July, August or September we feel these intuitive callings to taste a week or two of natural life. We wish to sleep in a tent, and eat our meals from a table without a table-cloth. The first time a party goes camping, the list of necessary articles is far from complete, and although inconvenience is made a joke on these occasions, too much of such fun grows stale. Unless you are experienced yourselves, you would better consult an old-time camper-out to tell just what you need, because those things you wish to take, and no more, for ease of trans-

portation demands that all superfluties be left at home. Recently in reading about the life of the modern Egyptians, I

found, by contrast, how little we Americans know of the fatigue of travel. In Egypt, an inn is a place where a stranger can get simply an empty room. He must carry with him not only his change of clothing but his bedding, his food and his cooking utensils. Something like this we incur voluntarily when we camp out.

Last summer, in July, a certain party was seen going along a smooth pike. It consisted of a wagon and a boy on a bicycle. The wagon was drawn by two sturdy horses, and in it were packed a boat, fishing-tackle, trunks, a gasoline-stove, camp-chairs, pots and kettles, groceries and two tents. The human lading



SUMMER POILET.

included two women and four men. Eight miles they drove on the public road, then turned into a by-way, which soon brought them to a beautiful little river. Here on a plain, back of which rose steep hills, they encamped. There were magnificent forest trees all about them, and from the kind which predominated they at once called their settlement "Camp Linden."

Who can describe the pleasure of that week? Just at that place the river descended over a series of shallow rapids, the ripple of which made a constant musical accompaniment to the call of the plowmen as they drove their horses in the fields to the north and west. All kinds of birds sang and chirped. Over beyond the back hills they found a cozy farm-house inhabited by an interesting old woman, who was ninety years of age, and her servant, an honest girl of forty. Here the campers bought milk, eggs, pies and cakes, and during their business intercourse all became the best friends.

The men of the party fished all day. The boys caught crawfish for bait and carried the wriggling things in the crowns of their immense straw hats. Yes, wearing the hats! There were evening excursions in the boat down the river a mile, where, by scrambling up a steep bank and taking a long walk, they could reach a post-office. Every part of the day had a new delight. The sunrise and sunset were particularly enjoyable.

At the end of a week they packed up and drove away. The boys for a long while ran beside the wagon, gathering wild flowers, which they gave to the women on the back seat till they were covered with the beautiful, gay blossoms. Once on the pike, they proceeded more sedately, and when home was in sight, it seemed good, and a good place to never forget the joy of that camping out.

All this may not seem so attractive to people who always have the beauties of country scenery; but they, too, need the care-free life and the change. It is pleas-

ant for two or three families to unite in such excursions; this will insure the social element necessary to the success of a summer outing, and the freedom from fine dress and other expensive accessories makes it the ideal of American enjoyment.

PORTRAIT SCRAP-ALBUM.

We were studying literature that winter with a determination. Everything that could be made to count did count. One of the pleasant and helpful features was a scrap-album for the portraits of authors. The query, "Where shall we get material?" was soon superseded by "What shall we do with all our material?"

We hunted up old magazines, newspapers and journals, and wherever we could get a helpful picture without sacrifice to a good article we clipped it. Book-stores were visited, where solicitations were made for old book catalogues. (Houghton & Mifflin, of Boston, supply a beautiful catalogue for ten cents.)

"Don't begin to paste until you have selected material," was the injunction heeded by eager boys and girls with a degree of impatience, but time proved the value of the command.

In a couple of weeks after the collecting began we were ready for mucilage. The arrangement of the pictures was one of the instructive parts. As we knew more of American authors, we began with them.

It was one of the requirements to place under or near the portrait a favorite quotation from the author. It was not strange that Louisa Alcott was first chosen by a majority of the class, for she was a general favorite. Right here, individuality began to assert itself, according to the

knowledge of the decorator. I have in mind one first page which contained Miss Alcott as the central figure. Above her picture was printed "Dear Aunt Jo;" below is her name, and to the right the quotation: "Do the duty that lies near thee." On the right-hand corner of the same page it seemed fitting to find the kind face of Ralph Waldo Emerson, Louisa Alcott's Concord neighbor and firm friend during dark days. Near his picture is the quotation: "Truth and goodness and beauty are but different faces of the same All." On another page we find Bryant, Whittier and Longfellow. Another page contains the portraits of lecturers who visited our town during the winter. Favorite sayings were remembered and put down under well-known faces. In this way we made the thoughts of these men our own. Edward Bellamy, Mrs. Ward and Margaret Deland form a characteristic group.

Then there are historical pages. H. Hopkins Smith, the popular writer of southern life, is surrounded by characteristic sketches from his delightful "Colonel Carter of Cartersville." Harriet Beecher Stowe is radiant in a frame of ebony.

Another page is "English, you know," with Tennyson as the central figure.

Beecher, Collyer and Agassiz form a good trio of strong faces, representing like intellects.



BOOK-COVER.—FIG. 2.

The book soon becomes invaluable to the maker of it. To one who can sketch or paint, a book of such a character might become beautiful in appearance. But its main beauty is that it constantly informs. Boys and girls may become interested in it and gain for themselves a valued source for information and at the same time be

occupied with a most fascinating and wholesome work.

I do not mean to say that all of the material mentioned has been accumulated in a two weeks' collection, for the work has been growing for two or three years. One source of information comes in this direction: I relate a personal experience. Among my collection I found the face of John Burroughs, of whom I knew nothing, but a little search revealed a lover of nature, a man devoted to the natural history of his own neighborhood, and especially interested in birds and bees, of which he has written some very enjoyable accounts. This is but one instance of many similar ones.

In conclusion, then, "with all thy getting get understanding"—in the way of a portrait scrap-album.

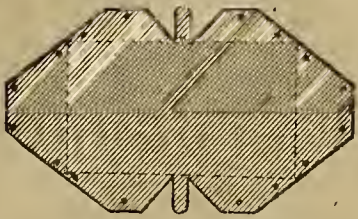
MARY D. SIBLEY.

HELPFUL HINTS.

BY CHRISTIE IRVING.

As the days get hotter we change our minds entirely about not wanting any more dresses. We do want some; real thin ones, too. The beautiful fabrics now upon the market are too tempting to resist.

Our model is one in which the soft girdle and sleeves are of the same material as the skirt, while the main waist can be of something else—a brocade silk or a



BOOK-COVER.—FIG. 1.

large-patterned, wool material. The simulated suspenders of black velvet are a little improvement on those shown earlier, looking more like a trimming. The hat is a straw brim, lined with scarlet gauze, a gauze crown and standing bows of scarlet ribbon, with a bunch of black silk flowers. It is very easy to construct the entire suit at very little expense.

A book-cover is very convenient to have when traveling. This one can be of brown linen, the edges neatly bound and tied together on the book, as shown in illustration, Fig. 2. In Fig. 1, the inside parallelogram is always the size of the book you wish to cover.

We have given so many carving suggestions that we feel any of our boys can get up the convenient bread-platter in our illustration. Once used in connection with the new bread-knife we spoke of in a former issue, you would wonder how you got along without it. The carving pattern around the edge is quite simple. Walnut is the best wood to use. Ours, which we got at a state fair a number of years ago, is still as good as new, and saves the accumulation of stale bread, as the slices are cut on the table as wanted. We have found, too, that having the bread in long, round loaves wastes none at all. The pans come with round bottoms, so that the bread rising round forms a perfectly circular slice when cut. Each loaf is baked separately, so that it is an even crust all around. It is very nice, too, for sandwiches.

KITCHEN CUPBOARD.—We give the illustration for a very complete cupboard, and being movable, like any other piece of furniture, is much easier taken care of. This is the facsimile of one in use, and as there is no patent on it, could be made by any one who understands cabinet-making. The front is the rolling shutter used on desks. The inside arrangement is very convenient; the drawers at one side are of good depth and size, and the cupboard at the right is intended to hold a barrel of flour. Well made, it would last a lifetime.

A FARMER'S WIFE'S SOLILOQUY AS SHE CHURNS.

I am not a radical, not a socialist, not a woman suffragist, but just an ordinary farmer's wife. I read several papers and see so much attempted advice to help the country women. It may be of interest to the many readers of FARM AND FIRESIDE to read a short experience of a not imaginary farmer's wife, but a real sketch of western life.

I was born in the year 1854, in California, not to a large fortune, but endowed with excellent parents. Who can describe the pleasure and delight, the

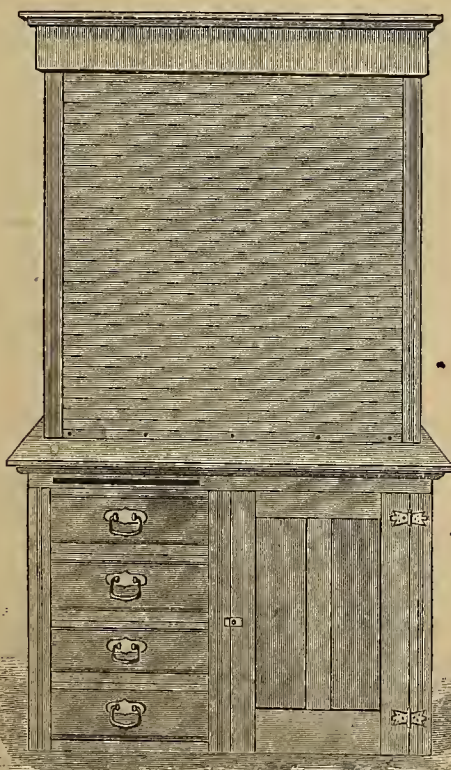
peace of mind and soft tranquility, the balmy air amid the green hills and rich woods of an inland village? The rose and honeysuckle clung to the cottage walls, the ivy crept around the trunks of trees, and the garden flowers perfumed the air with delicious odors. Such are the memories of my childhood's home.

Nature has many charms for me, and weary and tired from my household cares, which are many, I look from my kitchen window, where the great oak-trees stretch forth their green arms over the thirsty ground, converting open and naked spots into choice nooks. But beneath all this lingers in the least reflective mind a vague and half-formed consciousness of having held such feelings long ago.

When I was younger, nothing troubled me more than the thought of being called a hayseed. But when I came to years of reflection, and began to look around me and know how dependent the towns were on the farmers, my ambition turned into a new channel. Inclined by nature to industry, and fond of respect, how to help the real farmer's wife is the problem that puzzles me. My husband owns five hundred acres, all stocked with cattle and fine horses, all paid for. We are called rich, but the expenses on a big farm are enormous. Many friends say, "Well, I would keep help the year around." But, alas, willful waste neglect and many other extravagances would soon mortgage my lovely home, which years of toil and privation have enabled me to get.

But I am a nervous, delicate woman, and would like to attend the town aid society without a red face, coarse-looking hands and more or less dust or mud. My dress may be of silk; but I don't get many, so they will get out of style. You may put on a cosmetic to whiten your face; but that won't hide your country style. So if you live on a farm, don't attempt style, for you cannot cook, sew, wash, iron and do all the many and exhausting duties, and then dress in the latest style and go. No, sisters, we must plod on until we pass to our long home. Appreciation and honor are plants which grow mostly in graveyards.

Many years have passed since my mother was laid away, and often a dream, as a strain of gentle music, or the rippling of water in a silent place, or the odor of a flower, or even the mention of a familiar word will call up a sudden, dim remembrance of a happier existence long gone by. Don't think, sisters, I am not a happy woman; but I find it hard to recon-



KITCHEN CUPBOARD.—CLOSED.

cile with my imperious desire to carry my head high, that I must go feed the calves, turkeys and chickens, hunt up the eggs, get the butter ready for market, and my two little girls must start for school. Well, Marjory and Lenora won't marry farmers, I hope, for I think it is the hardest lot for women. I shall endeavor to give

them an education that will fit them for teachers. I wish some real farmer's wife would write and give her experience, not those who imagine how to perform the duties of a farmer's wife.

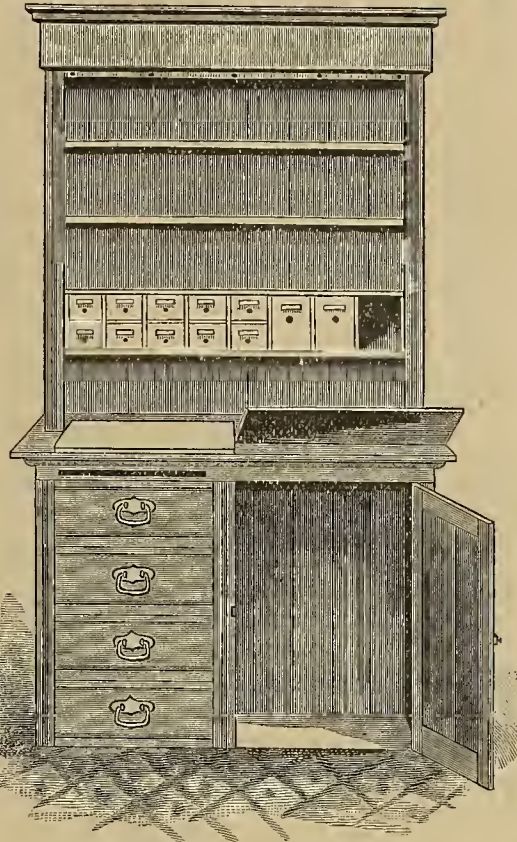
MARY B. California.

ECONOMY IN THE HOUSEHOLD.

MONETA, VA., July 2, 1892.

DEAR SISTERS:

Doubtless many of you have no faith in advertisements, so I wish to call your special attention to Frank Siddall's offer in FARM AND FIRESIDE of June 15, page 7. (It is also in this issue). There have been so many things advertised to help so much in washing clothes, which on trial have proved failures, that many of you, no doubt, will read Frank Siddall's offer and pass it by without giving it a thought.



KITCHEN CUPBOARD.—OPENED.

Nearly two years ago I, by accident, picked up a paper in which the same offer was made, and thinking it sounded quite reasonable, sent for the trial package. I used it on a *very large* wash, and being used to washing differently, many of the pieces came out looking *quite dingy*, while others were washed *beautifully*. I was not satisfied with the one trial, and as it was not sold in this section so that I could get it in small quantities, I ventured to send for a box, though my husband tried to persuade me not to do it, feeling sure it would prove a humbug and I would lose my money. As soon as I got used to Mr. Siddall's way of washing I was *delighted* and have always been very thankful I read and accepted the offer. My washing is now a small job compared with what it was the old way. My husband would not allow me to be without the soap now.

My clothes have been washed the old way only twice since I got the soap, and I sincerely hope they will not have to be washed that way again. It not only cuts the labor and time down to *half or less than half*, but it saves the clothes. I have very little patching to do now after washing. I find it the *cheapest* way of washing I have ever known yet. It *saves* time, labor, water, fuel and clothes. It is not only good for washing clothes, but excellent for all other purposes. In fact, it does all that Mr. Siddall claims for it. I do sincerely hope that every housekeeper who reads the FARM AND FIRESIDE will send for the trial package, and *follow directions precisely*. If you will give it a *fair trial* you will not be found without it in the future.

HATTIE S. ROBERTSON.

RECIPES.

ELDERBERRIES.—Did any of the readers of this paper ever try elderberries for winter use? I hope if they have not, they will try it next year. I have been told several times that they made as good pies as blackberries, but I never would believe it, for I could not bear the taste of them until last year. It was so hard for us to get fruit that I tried some, and was surprised at the way we ate them. To make pies, make a rich crust, put in your berries, sweetened to taste; then add two tablespoonfuls of vinegar,

sprinkle with flour, a little butter and water, put on a top crust and bake, and I know you cannot help liking it.

ELDERBERRY PUDDING.—Take one cupful of sour milk, two eggs and about one half teaspoonful of soda, enough flour to make a stiff batter and one pint of elderberries, prepared with two tablespoonfuls of vinegar. Bake one half hour; serve cold with cream and sugar.

ELDERBERRY JAM.—They are splendid medicine for colds and are good for children. By taking half elderberries and half sour apples, and making jam or butter, it can scarcely be told from blackberry jam.

GRAHAM BREAD.—I wonder why it is that more people do not use Graham. It is so healthy, and after one once gets in the habit of using it, white flour tastes flat. It is one of the very best medicines for constipation that I ever knew. I have recommended it to several for that, and I have never known it to fail. Some of the cases were very bad, too. I make the bread in this way: One and one half pints of water, two thirds of a cupful of molasses, a little salt and one teaspoonful of soda. Mix about as stiff as will stir up good and bake in a long bread-pan. It makes excellent gems, mush and muffins.

DROP DUMPLINGS.—I have a splendid recipe for drop dumplings that I have never seen in print. Two eggs, one cupful of sour milk, almost a teaspoonful of soda, a little salt; beat the eggs separately, stirring the whites in last; add flour enough to drop nice. We make them with boiled beef, chicken, beans, potatoes, or almost anything we boil, and think they are splendid. Care must be taken not to let them boil too long, and they must be left tightly covered until done.

JAM PUDDING.—

- 1 cupful of sugar,
- 1 cupful of butter,
- 1 cupful of buttermilk,
- 1 teaspoonful of soda,
- 1½ cupfuls of flour,
- 2 eggs,
- 1 cupful of jam.

Make into the consistency of a stiff batter, stirring in the jam last; turn into a greased pan and bake slowly forty minutes; eat with hard or soft sauce.

SUMMER MEATS.

With the summer season comes the traveling meat-market with its invariably tough meat from the two-year-old (?) stock.

When boiling, add one tablespoonful of strong vinegar to four or five pounds of meat, and you will then have tender beef. It does not alter the flavor in the least.

After dinner, put the remainder of the beef back in the kettle of soup until cold, and it will then be so much more juicy and sweet to slice cold.

If you have steak to cook, drop a few drops of vinegar upon the slices before pounding, and your steak will be very much more tender. Please try it, for tough steak is so disagreeable to masticate.

When you have steak left, chop three pounds fine, add three medium-sized slices of bread chopped fine, three eggs, two tablespoonfuls of salt, one tablespoonful of pepper, butter the size of an egg, one teacupful of sweet milk. Bake one and one half hours, and slice when thoroughly cold. This is such a nice dish for picnics or to serve in place of cold meat for tea.

Beef pies are nice to use up the cold bits left over. Put these into a basin, season with salt and pepper and a teacupful of the meat broth or water with butter added. Make a crust as for soda biscuit, and lay over the top of the meat. Bake one half or three fourths of an hour and serve hot.

Meat toast is nice. Chop the meat fine, add water enough to make as thin as ordinary gravy, add butter, pepper and salt, and when boiling hot, pour over some toasted slices of bread.

Do not forget the crock of codfish. It is the farmer's wife's "stand-by" in hot weather. When you get a fresh piece of fish, sit down at the very first opportunity and pick it all up as you would to cook and pack down in a jar; cover with a thin muslin cloth and cover that with salt. The fish is then ready to use at a moment's notice, and not one particle will spoil or dry up to waste, if it is kept in a cool place.

Canned salmon is good to pick up and cook with milk gravy, the same as codfish, only it will not need to be freshened in water first.

GYPSY.

Pleasant, profitable employment is offered every energetic person in introducing our world-famous picture, "Columbus at the Royal Court of Spain," in their neighborhood. See our grand offer in the July 1st issue, or write us for full particulars. Also read page 11 of this issue.

Our Sunday Afternoon.

ENTERING IN.

The church was dim and silent
With the hush before the prayer;
Only the solemn trembling
Of the organ stirred the air.
Without, the sweet, pale sunshine;
Within, the holy calm,
Where priest and people waited
For the swelling of the psalm.

Slowly the door swung open,
And a little baby girl,
Brown-eyed, with brown hair falling
In many a wavy curl,
With soft cheeks flushing hotly,
Sly glances downward thrown,
And small hands clasped before her,
Stood in the aisle aloof.

Stood half abashed, half frightened,
Unknowing where to go,
While, like a wind-rocked flower,
Her form swayed to and fro;
And the changing color fluttered
In the little, troubled face,
As from side to side she wavered
With a mute, imploring grace.

It was but for a moment;
What wonder that we smiled,
By such a strange, sweet picture
From holy thoughts beguiled?
Up, then, rose some one softly,
And many an eye grew dim,
As through the tender silence
He bore the child with him.

And long I wondered, losing
The sermon and the prayer,
If when some time I enter
The many mansions fair,
And stand abashed and drooping
In the portal's golden glow,
Our Lord will send an angel
To show me where to go?

—Sunday-School Visitor.

WHAT CAN REPLACE THE GOSPEL?

A MULTITUDE of men are bent on destroying Christianity. They wish to demolish the whole system and everything connected with it. Well, suppose they succeed? "Suppose," says Dr. E. Greenwald, "the Bible burned, the churches closed, the pulpit silenced, all Christian institutions of whatever kind overthrown, all Christian doctrines, Christian piety, Christian duty, Christian worship, Christian influence, Christian life, in public and private, in the church and in the family, by individuals and communities, to be wholly a thing of the past, and no trace of them permitted to remain anywhere in all the land. This would be the result if they should succeed in their insane crusade against Christianity. Where would we look for a better system than that which we would so wholly renounce? We have cut down this tree, where do we find another that bears better fruit? Let us look around and see what systems prevail in the world, and under whose control large numbers of the people are now living. Which would be selected in place of the Christianity renounced?"

Let the skeptic ponder this question. Let him look at heathenism, at Mohammedanism, at the dying superstitions of the eastern world, and let him ask the question, would he embrace any of these exploded absurdities? Let him look at atheism, a leafless, sapless tree, and inquire what a world would be without a creator, ruler or law; and then let him hesitate before he seeks to undermine a faith which has brought more joy, peace and brightness into the world than all the other religions that man has ever invented or embraced.—Faithful Witness.

FIGS AND THISTLES.

To love God is to love to please God. Ignorance is the mother of impudence. It is a lean pig that is always squealing. They that sow the wind shall reap the whirlwind.

Man manufactures most of his temptations himself.

God can only be God to those for whom he makes law.

The man who wants a great God must have a big Bible.

People who do wrong are always people who love wrong.

It is hard to be a friend to a man who is an enemy to himself.

Vinegar in a jug is a good thing, but in people it is a nuisance.

It is not doing wrong that brings damnation, but never stopping.

"He that knoweth to do good, and doeth it not, to him it is sin."

God wants his children to find out that he is always willing to help.

If you want to enjoy the sunshine, don't find fault with your shadow.

The less people know about religion the more severely they criticize it.—Ram's Horn.

THE UNDYING BOOK.

Nothing in the history of literature is so remarkable as the divine vitality which seems to pervade the book of God. No book has lived so long, or encountered such opposition; passed through such conflicts or spread so widely; and no book has maintained its existence with a hundredth part of the vigor which this book exhibits. It does not exhaust its energy, it does not grow old, it does not become obsolete; it lives in perennial freshness. The generations that have gone found it precious; the generations that remain find it equally precious, and whoever shall come after us shall find it is still the living and abiding word of God. Says Bishop Jewel:

"Cities fall, kingdoms come to nothing, empires fade away as smoke. Where are Numa, Minos, Lycurgus? Where are their books, and what has become of their laws? But that the Bible no tyrant should have been able to consume, no tradition to choke, no heretic maliciously to corrupt; that it should stand unto this day, amid the wreck of all that is human, without the alteration of one sentence so as to change the doctrine taught therein, surely here is a very singular providence, claiming our attention in a most remarkable manner."—Christian.

THE HELP OF PRAYER.

Prayer does not directly take away a trial or its pain, any more than a sense of duty directly takes away the danger of infection; but prayer preserves the strength of the whole spiritual fiber, so that the trial does not pass into temptation to sin. A sorrow comes upon you. Quit prayer, and you fall out of God's testing into the devil's temptation; you get angry, hard of heart, reckless. But meet the dreadful hour with prayer, cast your care on God, claim him as your father, though he seem cruel, and the degrading, paralyzing, embittering effects of pain and sorrow pass away, a stream of sanctifying and softening thought pours into the soul, and that which might have wrought your fall works in you the peaceable fruits of righteousness. You pass from bitterness into the courage of endurance, and from endurance into battle, and from battle into victory, till at last the trial dignifies and blesses your life. The answer to prayer is slow; the force of prayer is cumulative. Not till this life is over is the whole answer given, the whole strength it has brought understood.—Stopford Brooke.

OUT OF SORTS.

Some people are always "out of sorts." The weather is always just what they don't want. I met one of these men awhile ago, a farmer, who raised all manner of crops. It was a wet day, and I said:

"Mr. Nayling, this rain will be fine for your grass crop."

"Yes, perhaps; but it is bad for the corn, and will keep it back. I don't believe we shall have a crop."

A few days after this, when the sun was shining hot, I said:

"Fine day for your corn, sir."

"Yes, but its awful for the rye. Rye wants cold weather."

Again, on a cold morning, I met my neighbor, and said:

"This must be capital for your rye, Mr. Nayling."

"Yes, but it is the very worst weather for corn and grass. They want heat to bring them forward."—Dr. Todd.

You cannot afford to overlook our grand offer in the July 1st number of this paper, of the magnificent picture, "Columbus at the Royal Court of Spain," handsomely framed in 6-inch gold molding. It is an opportunity rarely given to place a picture of real artistic merit in your home. Many pleasing testimonials are pouring in from those who have already received them, saying that they go far beyond their greatest expectations and that our advertisement does not claim enough for their beauty and value. See our offer on next page.



Use Only
**BROWN'S
FRENCH
DRESSING**
on your
BOOTS & SHOES.
SOLD EVERYWHERE.



"A dollar saved is a dollar earned."
This Ladies' Solid French Dongola Kid Button Boot sent, prepaid, anywhere in the U.S., on receipt of Cash, Money Order, or Postal Note, for \$1.50. Equals every way the boots sold in all retail stores for \$2.50.
We make this boot ourselves, therefore we guarantee the fit, style and wear and if any one is not satisfied we will refund the money or send another pair. Common Sense and Opera Toe, widths C, D, E, & EE, sizes 1 to 8, in half sizes. Send your size; we will fit you.
We deliver Free. Catalogue Free.
DEXTER SHOE CO., 143 Federal St., Boston, Mass.
Mention this paper when you write.



THIS MACHINE \$12
You can give this elegant machine a thorough test before sending us one cent. TRIAL FREE. All attachments free. Every machine warranted 5 years. For catalog, full particulars, etc., cut this adv. out and send to us to-day.
ALVAM MANUFACTURING CO., Chicago, Ill.

TOKOLOGY, a complete Ladies' Guide in health and disease, has become a household word in thousands of families. Mrs. N. R. McC. writes: "Dear Dr. Stockham:—I cannot tell you how much TOKOLOGY has done for me. Our son came almost without warning. I most heartily rejoice when I hear of a 'Tokology Baby.' Prepaid \$2.75. Sample pages free. Best terms to agents.
ALICE B. STOCKHAM & Co., 277 Madison St., Chicago.

Hay-Fever Sufferers

Should read our new 112-page book on the treatment and cure of Hay-Fever and Asthma. Sent free on application.

"I have been a sufferer from Hay-Fever and Asthma from birth—26 years. I have tried all remedies that came to my notice without permanent relief. I am pleased to say that your medicines certainly cured me to stay cured.
W. L. WEDGER, Roslindale, Boston, Mass."

P. Harold Hayes, M. D.,
716 Main St., Buffalo, N. Y.

CONSUMPTION

(except last stages), CATARRH, BRONCHITIS, ASTHMA, and all Diseases of the Lungs, surely cured by the New Andral-Broca Discovery. Not a Drug, but a New Scientific Method of Home Treatment. Cures Guaranteed. Sent FREE to all who apply. Try it FREE, and pay if satisfied. State age and disease in full. Address NEW MEDICAL ADVANCE, 62 E. 4th St., Cincinnati, O.

You need work.

(If not this adv. does not interest you)

You can make \$75 to \$250 a month, provided you work with a little vim, vigor, pluck and push.

We have got something new. It costs nothing to investigate. Must have a live, wide-awake representative in your community, either man or woman at once. All information cheerfully sent by return mail. Better write to-day. Address in full,

THE STANDARD SILVERWARE CO.,
ORDER DEPT. 501 BOSTON, MASS.

If afflicted with sore eyes use **Dr. Thompson's Eye-Water**

Kennedy's Medical Discovery

Takes hold in this order:

**Bowels,
Liver,
Kidneys,
Inside Skin,
Outside Skin,**

Driving everything before it that ought to be out.

You know whether you need it or not.


Sold by every druggist, and manufactured by
DONALD KENNEDY,
ROXBURY, MASS.

LOOK HERE.

Do you use lamps? Our patent attachment improves the light, avoids dirty work in filling, saves time and money. You need it. All housekeepers need it. Samples free; and Gold Watch premium to first each week. Write at once. Agents wanted. Good pay, steady work. 3 months subscription to Monthly Journal for 2c. stamp.
J. Bride & Co., Nassau St., New York, N. Y.




10 DAYS FREE TRIAL
in your own home. First class Sewing Machines shipped anywhere to anyone at wholesale prices. All latest improvements. Warranted five years. Complete set of attachments FREE. Send for catalogue. Standard Singer Machines, \$9.50 to \$15.50. \$20 Arlington Sewing Machine, for \$29.50. \$60 Kenwood Sewing Machine for \$23.50.
CASH BUYERS' UNION, 160 W. Van Buren St. B 53 Chicago.



PRICE \$180.
We Sell DIRECT to FAMILIES
PIANOS ORGANS
\$150 to \$1500 \$85 to \$500.
Absolutely Perfect!
Sent for trial in your own home before you buy. Local Agents must sell inferior instruments or charge double what we ask. Catalogue free.
MARSHAL & SMITH PIANO CO.,
235 East 21st St., N. Y.
Mention this paper.



LYON & HEALY,
154 to 166 State St., Chicago.
Will Mail Free their newly enlarged Catalogue of Band Instruments, Uniforms and Equipments, 400 Fine Illustrations, describing every article required by Bands or Drum Corps. Contains Instructions for Amateur Bands, Exercises and Drum Major's Tactics, By-Laws and a Selected List of Band Music.



PRINTING OUTFIT 15¢
COMPLETE. 4 alphabets rubber type, type holder, bottle, bottle ink, ink pad and T-bar. Put up in neat box with directions for use. Satisfaction guaranteed. Worth 50c. Best Linen Marker, Card Printer, etc. Sets names in 1 minute, prints 500 cards an hour. Sent postpaid 15c; 2 for 25c, Cat. free.
R. H. INGERSOLL & BRO 65 Cortlandt St. N. Y. City.
Mention this paper.



A BIG OFFER
50c. MADE IN A MINUTE! If you will hang up in the P. O., or some public place, the two show bills that we send, we will give you a 50c. cert., and send it in advance with samples and bills. This will trouble you about one minute, and then if you want to work on salary at \$5.00 or \$10.00 per month, let us know. We pay in advance.
GIANT OXIE CO., 21 Willow St., Augusta, Me.



**CAMPAIGN
BUTTONS**

Our new silk wove Campaign Button is the neatest thing out. Everybody wears it. Cut shows official Republican Button. Democratic same quality, different design.

AGENTS MAKE \$10.00 A DAY
by following up political gatherings. Why don't you try it! You can sell a few dozen around home. Order one for yourself anyway. State whether you want Democratic or Republican. Sample 10c. One doz. 75c. 100 for \$5.00.
J. BRIDE & CO., 122 Nassau St., New York
Mention where you saw this advertisement.

PROVED

BY LIVING
WITNESSES
THAT

**THE OWEN ELECTRIC BELT
AND APPLIANCES**

cure more people than any other one remedy under the sun.

NO HARM
can come from their use. A genuine current of electricity, continuous, can be made mild or strong, or reversed at the pleasure of the wearer. All of the above fully confirmed and indorsed, by hundreds who have tried them, in our

ILLUSTRATED CATALOGUE.
Also description, cuts, prices and other valuable information, printed in English, German, Swedish and Norwegian languages. This catalogue or a treatise on rupture cured with Electric Truss will be mailed to any address on receipt of six cents postage.

The Owen Electric Belt & Appliance Company,
MAIN OFFICE AND ONLY FACTORY,
THE OWEN ELECTRIC BELT BUILDING,
205-211 State Street, corner Adams, CHICAGO, ILL.
New York Office, 826 Broadway.

THE LARGEST ELECTRIC BELT ESTABLISHMENT IN THE WORLD.
MENTION THIS PAPER.

Selections.

GROWING OLD.

It does, indeed, to me seem strange,
Since in myself I feel no change,
That in the friends whose love I hold
I see a something day by day
That daily plainer seems to say:
"The friends you love are growing old."

A deepening of the lines of care,
A tiny wrinkle here and there,
I see; a silvering of the gold,
A shadow underneath the brows
Besprinkled now with powdered snows,
Where clustered dusky locks of old.

With sober gladness they rejoice,
More mellow grown each merry voice,
Each smile less bright, less cold;
Still cherished friends as ever we,
Hand clasped hand more tenderly
As days go by and we grow old.

As we grow old. Ah, this is strange!
I said I felt in me no change;
Yet plain as these my words have told,
Upon my beard faint streaks of gray
Say silently to me to-day:
"Thou, with thy friends, art growing old."
—Saltcoat's Herald.

A WOMAN'S DAINTY HAND.

AMERICAN women are gradually adopting the French idea of wearing a glove. Formerly it was thought that a glove was a perfect fit when it was almost impossible to get it on, at least for the first time, and the whole glove was considered a size too large if the first button could be buttoned with any comfort. Here is the French idea of the fit of a glove:

The hand should be entirely at ease in

a glove, without the appearance of being short and stumpy. The fingers of the glove should be just as long as the fingers when the glove is on the hand, and the first button must close with perfect ease, without stretching the kid. Great care must be given to the putting on of gloves for the first time. The hand must be completely dry, the four fingers put on first, with care that the tips fit closely to the tips of the fingers; then, with a slight movement of the other hand, the thumb is introduced and the glove well drawn down before proceeding to button. Always remember to button the second button first, and then the succeeding ones, leaving the first to the last. This prevents the skin from cracking and the buttonhole from splitting. Never take gloves off by pulling the tips of the fingers. Turn down the wrist and pull them off; they will then be turned on the wrong side, and it is best to leave them thus until the moisture of the hand is dry. When dry, turn them. Never roll them together, but stretch them and lay them out in the glove-box.—Emma Bullet, in Brooklyn Eagle.

VEILS.

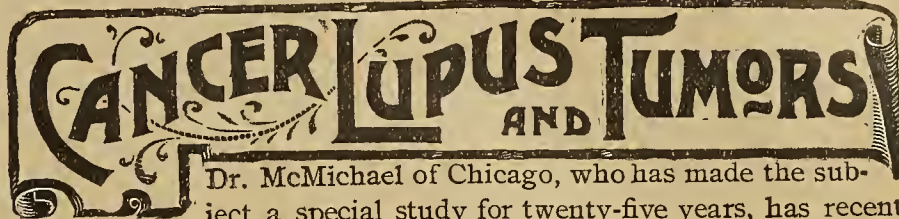
Veils are immense, and of white spotted net, to wear over the new style of straw hats of large size. Dotted black lace, some of which has a spot in straw or metal, is also shown, while quite short "mask" veils, although somewhat displayed, seem to have given place to a veil caught under the chin and very much bunched up at the back of the toque or capote, and decorated with short frills of lace on the pendent ends.—Domestic.

We want to introduce Frank Siddall's soap in every household. See page 7.

HARTSHORN'S SELF-ACTING SHADE ROLLERS
Beware of Imitations.
NOTICE
AUTOGRAPH
OF
Stewart Hartshorn
AND GET
THE GENUINE
HARTSHORN
Mention this paper when you write.

How TO MAKE A Fortune

WANTED—Salesmen; who can easily make \$25 to \$75 per week, selling the Celebrated Pinless Clothes Line or the Famous Fountain Ink Eraser; patents recently issued. Sold only by salesmen to whom we give EXCLUSIVE TERRITORY. The Pinless Clothes Line is the only line ever invented that holds clothes without pins—a perfect success. The Fountain Ink Eraser is entirely new, will erase ink instantly, and is king of all. On receipt of 50c, will mail sample of either or sample of both for \$1, with circulars, price-lists and terms. Secure your territory at once THE PINLESS CLOTHES LINE CO., 168 Hermon Street, Worcester, Mass.



Dr. McMichael of Chicago, who has made the subject a special study for twenty-five years, has recently published the result of his investigations in his treatise on "Cancer and Tumors." It is a work of sixty-four pages, characterized by plain unvarnished statements and its total absence of extravagant and bombastic claims inspires the confidence of the reader, whose reason and common sense are appealed to. Dr. McMichael is an authority in his special branch of science, and has achieved remarkable success. By his method he succeeds in effecting permanent cures in 80 per cent. of cases treated without cutting; while 97 per cent. of the cases operated upon with the knife eventually die from return of disease. The most remarkable features of the work are the reports of cases extending over a period of twenty years. In many instances the disease had been cut out by surgeons two and three times and then given up as hopeless and were afterwards cured by Dr. McMichael's method. Copies of the book will be sent free to any address. In writing please send the addresses of friends who would be interested, and copies will be sent to them also.

It does not advertise a medicine, or any other catch-penny device.

Address L. D. McMichael, M. D.,
180 Wabash Ave., Chicago.

Be sure to mention this paper when you answer this.

A Fifteen Dollar Picture and Gold Frame

WILL BE SENT TO THE FIRST RELIABLE PERSON
APPLYING FROM EACH LOCALITY, FOR

ONLY \$1.50.

Size of Picture, 20 by 28 inches. Size of Frame, 31 by 40 inches, made of gold molding 6 inches wide.

See Our Full Description in July 1st Issue.

PURCHASERS ARE SURPRISED!

AGENTS ARE ENTHUSIASTIC!

The picture is equal to a costly painting. The frame alone cannot be replaced at a store for \$3.00. Do we claim too much? We have received hundreds of testimonials saying they are more than we claim, that they go beyond the expectations of everyone.

WE WANT WIDE-AWAKE, PUSHING AGENTS EVERYWHERE.

This is an open door to the greatest money-making business of the age. An opportunity of a lifetime to make money and make it easily. The picture, frame, and especially the price, have caught the popular favor. Many agents report it the best seller they ever handled.

One lady agent cleared \$5.00 the first hour after she received her outfit. Two agents cleared over \$50.00 in eight hours. Another made over \$85.00 in nine days.

WHAT THE PEOPLE SAY.

A Grand Work of Art. Receiving Orders with no Soliciting.

JERRY CITY, O., July 10, 1892.
The picture has been duly received and in good order. Would say that I am well pleased with it. It is a grand piece of workmanship in art, and I think every American home should have one. I took one order the first evening without even soliciting it. Others who have seen it want them.

A. T. HICKERSON.

Cannot See How They can be Made for the Money.

JERICHO, Mo., July 8, 1892.
I received the picture and think it perfectly splendid. It goes far beyond my expectations. I can't see how they can be made for the price you charge.

GEO. H. RUGGLES.

Just as Represented. Finest He Ever Saw for the Money.

RIDGEWAY, Mo., July 1, 1892.
I received a copy of your famous picture, "Columbus at the Royal Court of Spain," and it is just as you represented it to be. I think it is the finest picture I ever saw for the money.

J. W. MAPLE.

It is Grand. Far Outreaches His Expectations.

SHAMOKIN, PA., July 1, 1892.
I received the outfit to-day, and will say this about the picture, that it far outreaches my expectations. It is grand.

JOS. E. KERSCHNER.

Should be in Every Home.

BLOOM CENTER, O., July 11, 1892.
I received the picture, "Columbus at the Royal Court of Spain," in good order, and can say if it strikes others as it does me it will be in every home.

MRS. G. A. HONE.

Delighted to Find It a Fine Work of Art.

ARLINGTON HEIGHTS, ILL., July 7, 1892.
I have received your picture, "Columbus at the Royal Court of Spain," in good order and am delighted to see in it a fine work of art.

WM. RAPHEIM.

Surprised at Its Magnificence.

NEW WINCHESTER, O., June 30, 1892.
Just received picture. Am surprised at its magnificence.

C. W. G. OTT.

Do not delay; be the first from your locality to order and take advantage of this grand opportunity to get into a paying business. Agents are also offered a

FREE TRIP TO THE WORLD'S FAIR. Write for particulars and terms to Agents.

Address FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

FOR ONLY \$1.50.

One of these Grand Pictures, in Our Large Gold Frame, will be sent to the first reliable person applying from each locality, for only One Dollar and Fifty Cents, if he promises to show it and help introduce it among his friends and neighbors.

COUPON

Entitling the sender to the Grand Fifteen Dollar Picture and Gilt Frame, and this paper one year, for Only \$1.50.

MAST, CROWELL & KIRKPATRICK, Publishers,
Springfield, Ohio.

For \$1.50 inclosed, please send me the Picture, "Columbus at the Royal Court of Spain," in the large Gilt Frame, made of 6-inch molding, and measuring 31 by 40 inches. Also send Farm and Fireside one year without extra charge. In return for my receiving the picture and frame and the paper one year at this low Special Price, I agree to show them to my friends and neighbors, to whom I will endeavor to make sales at the regular price.

Name.....

Post-Office.....

County..... State.....

Write Nearest Express Station here

Also send Farm and Fireside one year free, to my address as above.

If you are already a subscriber, when you accept this offer one year will be added to your present subscription.

Cut out, fill up and return to us the above coupon, with \$1.50, and you will receive the complete Picture and Frame, and also this journal one year. If you are already a subscriber, one year will be added to your present subscription. Only one picture will be sold to one person on these terms, and that to the first applicant from a community.

WHAT AGENTS SAY.

Equal to a \$150.00 Picture—Expects to Sell 1,000 Pictures by October 1st.

WOODSFORD, ME., July 11, 1892.
Gentlemen:—The beautiful frame and elegant picture, "Columbus at the Royal Court of Spain," received in perfect order. I think it equal to a \$150.00 picture I have seen at Brunswick, Me. It would be hard to tell which is the better of the two. I am pleased beyond words to express, and fail to see how you can afford to give so much for the money. I would not take \$150.00 for the picture if I could not get another. I believe I can sell 1,000 before October 1st. * * * WONSLOW BOWERS.

Is Bringing Him \$10.00 a Day Profit.

WARSAW, N. Y., July 6, 1892.
Dear Sirs:—Please send me another order book. I sold 10 framed pictures the first day, and am going to keep at it and try for 300 or more. It is the best thing to sell I ever handled.

A. E. WARES.

Picture Just Received and Already Have Nine Orders.

HARLAN, IND., July 2, 1892.
I received the picture and am pleased with it. Have already taken 9 orders. * * *

B. W. HENDERSON.

Almost \$5.00 a Day Profit.

WEBSTER, MASS., July 11, 1892.
I have canvassed only about three days, and have taken fourteen orders. * * *

A. MAHAN.

Fifteen Sold and Writes for More Order Books.

SHENANDOAH, PA., July 9, 1892.
Dear Sir:—I report progress. I have taken 15 orders. Please send me by return mail another order book. * * *

JAMES MAY.

Better than a \$15.00 Picture—Frame Alone Worth \$6.00.

SPEEDVILLE, N. Y., July 11, 1892.
Gentlemen:—The beautiful picture, "Columbus at the Royal Court of Spain," received in perfect order, and I am well pleased with it. It is better than a \$15.00 painting. I could not make the frame for less than \$6.00. Will close my shop and go to work next week. * * *

W. J. WAKELIN.

Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query in order that we may answer by mail if necessary. Querists must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

To Exterminate Cockroaches.—A. C. W., Hugo, Ill. Borax is said to be the best cockroach exterminator known. Sprinkle powdered borax around their haunts. It is harmless, and to be preferred to the poisons that are recommended for the same purpose.

Etching on Steel.—J. H. W., Mountain Glen, Ill. Cover the surface with a thin coat of asphaltum varnish of fine quality; then cut the design through to the surface of the steel, and etch with a weak solution of nitric acid in water; finally, wash with hot water and remove the asphaltum with hot turpentine.

Squash-vine Borer.—J. D., Kymulga, Ala. The worm you send is the squash-vine borer. Cut out the worms before they destroy the plants, and cover the first joint of the plant, early in the season, with fresh soil, packing it firmly, in order to induce the vine to strike roots there. While the plants are young, the worms, should they appear on the leaves, can be destroyed by sprinkling the plants with a solution of white hellebore, one ounce to two galls of water. Strong tobacco-water is also good.

Bunching Vegetables.—C. F. O. of L. H. T., Spokane, Wash., writes: "What tying materials are used, and how, in bunching vegetables?"

REPLY BY JOSEPH:—A good many different materials are in use in the different markets; as ordinary cotton string, basswood bark, ribbons of various kinds, raffia, etc. For bunching asparagus, rubber bands are coming in use, and I am sure cannot be surpassed for the purpose. In regard to the number of each kind of vegetable, definite rules cannot well be given, as it depends on the size of the individual specimens, and perhaps on the fashion in particular markets. Later, I will try to go more into detail in this matter.

Care of Small Seeds.—C. F. O., Springfield, Ohio, writes: "I would like to hear from Joseph in regard to the proper method of gathering and wintering such seed as peas and beans—how to keep the bugs out, etc."

REPLY BY JOSEPH:—This is a simple matter. Pull the peas or beans promptly when ripe; let the vines get thoroughly dry and then thresh out the seeds, which should be cleaned by running through a fanning-mill and, if possible, picked over by hand. Then store in paper sacks or in coarse bags of any kind (old, washed fertilizer bags are first-rate), keeping them in a granary or other suitable place. In order to destroy the weevils that may be in the seeds, put buhach or camphor gum in with the peas or beans, or expose them to the fumes of bisulphide of carbon in a closed vessel, as frequently explained in these columns.

Cementing Drain Tiles for Water-pipe.—Patent Rights.—H. J. D., Glandorf, Ohio, writes: "Can 2½-inch drain tile be cemented water-tight to carry water in level ground for a distance of about 225 feet from one trough to another? I have been discussing with others about patents. May anybody imitate any patent as long as he makes them a little different, for his own use?"

REPLY:—If you cannot get good iron pipe at a reasonable price, get vitrified or sewer tile and cement the joints. A 1½-inch iron pipe is sufficient for your purpose. The ordinary drain tiles will do if there is some fall, but not if the water is to be forced to rise at the lower end. You would be liable for infringing the patent if you do what you suggest.

Value of Ashes.—J. F. C., Philadelphia, Pa., writes: "I have on hand quite a quantity of hemlock-wood ashes. Will you tell me their value? Say price per bushel."

REPLY BY JOSEPH:—These ashes have probably about five per cent of potash, worth 6 cents per pound, and one and one half per cent of phosphoric acid, worth 8 cents per pound. They are consequently worth 13 cents per bushel, or \$6.50 per ton. I think you can calculate on getting that much, and probably much more, out of them by their judicious use on your land. The tendency of late has been in the price reduction in ashes. At least, I see that W. S. Powell, of Baltimore, is offering a good quality of unleached wood ashes, probably much stronger than hemlock ashes, at \$8 the ton, while we used to pay from \$10 to \$12, and even more, for Canadian ashes of doubtful strength.

Broccoli-Brussels Sprouts.—W. B. L., Gratiot, Ohio, writes: "How do you cultivate broccoli? Will it keep over winter? How do you prepare it to eat?—Are Brussels sprouts any good?"

REPLY BY JOSEPH:—Broccoli is simply a kind of cauliflower, and grown in the same way as that vegetable; indeed, I do not see any reason why it should not be simply called "late or winter cauliflower." Keep it and prepare it for the table the same as you would any other cauliflower. Brussels sprouts belong to the cabbage tribe, but instead of forming one large head on top, like ordinary cabbages, Brussels sprouts make a whole lot of little heads about the size of walnuts, all along the stem. These little heads far surpass the ordinary cabbages in quality, but they are not quite so easily grown. You can sow the seed in early spring right where you want the plants, then thin to one good plant to the foot of row. Otherwise, the culture needed for cabbage or cauliflower should be given.

Canada Thistles.—B. B., Mt. Horeb, Wis. From Beal's "Grasses of North America" we take the following: "Canada thistles have long roots, which store up nourishment during the latter part of summer and fall to feed the spring growth. To kill the thistles without the loss of a crop, have the land rich, if possible; at least, have it well seeded to clover, and by top-dressing with plaster, ashes, or by some means, get as good growth to the clover as possible. As soon as the clover is in full bloom, and here and there a thistle shows a blossom, mow and make the crop, thistles and all, into hay. After mowing, apply a little plaster to quickly start the growth of clover. You will find this to come much quicker than the thistles. As soon as the clover has a good start—from July 20th to August 5th—plow down, being careful to plow all the land and to fully cover all growth. Then roll and harrow at once, so as to cover every thistle. But few thistles will ever show themselves after this, and they will look pale and weak. When they do show, cultivate thoroughly with a cultivator having broad, sharp teeth, so as to cut every one off under the ground. In two days go over with a sharp hoe and cut off any that

may have escaped the cultivator. Watch the thistles, and keep using the hoe and cultivator until freezing weather. You will see them getting scarcer each time and looking as though they had the consumption. By plowing the field just before freezing up you will have the land in the finest condition for a spring crop. This plan not only kills thistles, but ox-eye daisies and other weeds. It is much better than a summer fallow, and without the loss of a crop."

VETERINARY.

Conducted by Dr. H. J. Detmers, Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Querists must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column, must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances.

Warts on Cow's Teats.—W. J. H., Chadwell, Oregon. Please consult recent numbers of FARM AND FIRESIDE.

Probably Heaves.—J. W., Elmwood, Ohio. Your horse, it seems, suffers from an incurable, chronic difficulty of breathing, usually called heaves. See recent numbers of FARM AND FIRESIDE.

Diabetes.—Rev. I. K., Tallulah, La. Your mare either is very old—much older than you think—or she don't receive proper care and proper food. If it is the latter, the remedy suggests itself, and if the former, nothing, of course, can be done.

Sulphur for Brood Mares.—J. M. B. Y., Waxahachie, Texas. Sulphur is insoluble, and therefore almost indigestible. Do not know that it will cause abortion, but there is no need of giving it to brood mares nor to any other domestic animal.

Wind-sucking.—W. W. K., Parker's Landing, Pa. Wind-sucking is a bad habit. There is no remedy, and consequently no cure. A strap, buckled around the neck, may for the time being prevent the horse from practicing its bad habit, but will not effect a cure, and, of course, will incommode the horse.

An Inveterate Fistula.—T. F. G., Orange Grove, Miss. The best you can do is to commit the horse to the care of a good veterinarian, who, very likely, will succeed in effecting a cure of such an inveterate fistula, but you never will if you treat the animal yourself; it is therefore useless to give a description of the treatment, which would require a great many "ifs" and "buts."

Periodical Ophthalmia.—J. D., Forest City, Iowa. Periodical ophthalmia, or moon blindness, must be considered as an incurable disease. So-called wolf-teeth have nothing to do with it. Applications of belladonna extract or of atropine prevent the contraction of the pupil and an adhesion of the iris to the crystalline lens, and therefore somewhat preserve the appearance of the diseased eye, but has no curative effect. Aconite is useless.

Old Sores.—W. J. W., Austin, Texas. You may try the following: First, clean the old sores thoroughly. Then apply some boric acid, enough to cover the sores, put on a small bunch of absorbent cotton, and then apply a bandage, commencing the bandaging at the hoof. Repeat these applications morning and evening. If there should be so-called proud flesh, you may destroy it by one or two applications of finely-powdered sulphate of copper.

Lampas.—C. A. B., Tauwax, Wash., writes: "I have a four-year-old horse which has the lampas. His upper gums are on a line with his teeth. Will you kindly tell me what I shall do for him, how I shall do it, and what is the cause of it?"

ANSWER:—Lampas is an imaginary disease. All young horses have succulent gums, especially when in a pasture or being fed with juicy food and when shedding their teeth. To cut or to burn the gums, as is sometimes done by ignorant persons, is inexcusable cruelty. If a horse lacks appetite, it has some other cause.

Abscesses.—A. W. B., Genesee, Idaho. You neglected to state whether the abscesses in the bag of your mare are only in the skin, or whether the same extend deeper, into the mammary gland. If it is the former only, strict cleanliness and repeated applications of a three-per-cent solution of carbolic acid, or repeated applications of boric acid, will probably effect a cure. If, however, they are deeper, they may first require enlarging of the opening, in a downward direction, of course, so as to permit the pus to be discharged, and then dressing (filling up) twice a day with absorbent cotton saturated with an antiseptic; for instance, a three-per-cent solution of carbolic acid.

Swellings.—G. M. W., Cromwell, Iowa, writes: "I have a three-year-old filly running in pasture that strained the tendons of the right fore leg at the fetlock. It is swelled above the joint and at the top of the shoulder-blade. She carries her leg when walking."

ANSWER:—You really fail to give a description of your case; you do not even say whether the horse is lame or not. If there is a swelling at or above the pastern-joint and also "on top of the shoulder," the same must have different causes, and, for all that I can learn from your description, the swellings may be due to bruising. The best you can do is to have the animal examined by a veterinarian.

Probably Choked.—A. C. H., Westerville, Neb., writes: "One evening my cows came home from pasture, all well as usual. In a short time one of them commenced coughing; soon she got worse and appeared to be choking and bloating. In about an hour she was dead. She swelled so much that she bursted soon after we began skinning her. All we did was to drench her with salt water. The cattle had access to nothing but grass, rock salt and water."

ANSWER:—Your cow, it seems, was choked. With what I cannot tell; have no means of knowing. The remedy would have been to remove or push down the foreign body stuck in the esophagus.

Probably Lung-worms.—J. A. A. There must be something radically wrong concerning the diet and treatment of your calves. The lung trouble you complain of is probably caused by the presence of numerous small worms (*Strongylus micrurus*) in the bronchial tubes. Whether or not this supposition is correct you can easily ascertain by opening the bronchial tubes of the next calf that dies. Nothing can be done with medicines, because the worms are inaccessible to the latter. The disease, though, can be prevented if the calves are kept away from low and wet places, are

watered with good well-water, have no access to stagnant water or water from stagnant pools, and are not fed with food that has grown in low and wet places.

Dysentery.—G. B. A., Nehalem, Oregon, writes: "What is the matter with my calf? It first was taken with the scours, and in about two days it began to appear sick and in much agony; it acted as though it had cramps in the bowels. It does not take as much milk as usual, and discharges more or less blood."

ANSWER:—The disease of your calf or calves is due either to unwholesome food and to foul air or to exposure, or maybe to all of them. Remove the causes and thus prevent a recurrence. The calf now sick will not need any more treatment when this reaches you. Common diarrhea in calves, provided the causes are removed, is usually cured if the following mixture is given, divided in two equal portions, one in the morning and one in the evening: Powdered opium, 10 grains; carbonate of magnesia, 2 scruples; Russian rhubarb, half a dram; chamomile tea, 5 to 8 ounces.

An Old Sore.—F. W. S., Alma, Mo., writes: "I have a mare that was cut on a barbed wire last September, and had nothing done for it until about three months ago. The cut was four inches across the hock-joint. It has healed up except a spot about as large as a quarter of a dollar, and that gets red flesh in it. Her hock-joint is swollen some, but has no fever, and she is not lame."

ANSWER:—If so-called proud flesh has again made its appearance, apply once more a little finely-powdered bluestone (sulphate of copper), and then dress the sore twice a day with iodoform or boric acid, protect it with a small bunch of absorbent cotton, and bandage the leg. Commence bandaging at the hoof, and renew the bandage twice a day, when the sore is dressed. Finally, keep your mare in the stable, and of course exempt from work until a healing has been effected.

May be Chronic Catarrh.—C. D. J., Tiverton Four Corners, R. I., writes: "What is the matter with my horse? He is eight years old. One year ago he began to blow his nose as if from a cold. This has continued, with a watery substance coming out of his nostrils, which has thickened now to a milk-colored discharge. He was in bad condition through the winter; we supposed from worms. He also falls asleep when in harness and left standing. His stable is four feet wide, and dry and warm. I don't think he lays down at night unless he falls."

ANSWER:—What you complain of is probably a chronic catarrh, but as your communication does not indicate its seat, it may be best to have your horse examined by a competent veterinarian. Still, in the treatment of cases of chronic catarrh, a good hygienic treatment is, as a rule, of more importance than medication.

Summer Eruption.—H. K., Wayside, Miss., writes: "I wish you would prescribe for my horse. He has lumps come on him from the size of an egg to as broad as my hand. They soon go away. Some burst, and bloody water comes out. I feed him on chopped corn, sheaf oats and Bermuda hay, with some green grass. His bedding is cypress sawdust. He has a lot to run in. His hide looks like it is full of daudruff; he is very hard to keep clean."

ANSWER:—What you describe may be called a "summer eruption." It is troublesome but not dangerous. Suitable diet—food easy of digestion in moderate quantities—and good grooming constitute the principal part of the treatment. Besides that, you may give as a physic a pill composed of one ounce of aloes (the de Barbados preferred), half an ounce of powdered marsh-mallow root and just enough water to make the powders stick together. Such an eruption is likely to occur every year, especially in the fore part of summer.

Died of Some Respiratory Disorder.—D. E. M., Watertown, Ohio, writes: "One evening last week I noticed one of my fat wethers standing with his mouth open, panting as if he had been running. The next morning he was still panting. I watched him some time. He would cough some and snuff his nose some. I caught him in the evening. He was frothing at the mouth and his heart was beating very fast. I did not give him anything. The next morning he was dead. When I went to bury him I could see a little blood on one side of his nose. There is another commencing to pant, cough and sneeze like the one that died. Would like to know what the disease is and what to do for it."

ANSWER:—You could easily have answered your question yourself if you had made a post-mortem examination, and especially had examined the organs in the chest. The sheep probably died of some respiratory disorder, but the nature of the same does not appear from your communication. As a consequence, a treatment cannot be outlined.

Probably an Attack of Influenza.—E. H. J., Stratton, Neb., writes: "I have a team of five-year-old mare mules that had a very severe attack of catarrh a few weeks ago. It commenced with a slight cough, and then a copious discharge from the nose, from both nostrils. The cough, though different and less frequent, still continues. The discharge from the nose has ceased. When they cough they do not more than get half a breath until another spasmodic cough comes on. What can I do to prevent its becoming a chronic cough?"

ANSWER:—Exempt the mules from work, keep them on sound food easy of digestion, and protect them against wet and cold and inclement weather in general. The above is the main part of the treatment. If you desire to give medicines, you may give three times a day, mixed with the feed (a bran mash, for instance), a heaping tablespoonful of the following compound: Tartar emetic, one ounce; chlorate of ammonia, crystal, three ounces; and of powdered marsh-mallow root, powdered aise seed and powdered licorice-root, four ounces each.

Protective Inoculation against Swine-plague.—R. W., Boston, Mo. I have given the whole to the public. There is no division into territories for anybody, and nobody can monopolize it. Neither will there be any agents.

T. H. H., Seward, Neb. The protective inoculation is preventive but not curative. There is no "remedy" about it. You evidently have not read, but only glanced at the article in FARM AND FIRESIDE of July 1st. Read it closely and you will find that all your questions have been answered in advance.

B. F. S., Ernul, N. C., and others. Please read the article you refer to more carefully and you will find that all your questions are answered. I may be able to furnish a limited quantity of virus in about four or five weeks from now. The difficulty is to get properly-made vials in which it can safely be sent. They have to be made to order, and have been ordered. All the virus I shall be able to furnish will be on sale at H. Braun, Sons & Co.'s, 24 North High street, Columbus, Ohio. I myself have no time to attend to the selling, packing, expressing, etc., and therefore have to leave that to a business man.

May be a Ridgling—Summer Eruption.—R. B. S., Lincoln, N. C., writes: "I have a horse two years old that has one seed that was cut for but could not be found when the other was. Since that it has never come down. Is there any way to get it? If not, is there any remedy to calm him? He is a favorite, and I want to get it out if possible. I have a four-year-old mule that has a breaking out, caused, I think, by getting overheated. What is the remedy for the eruption?"

ANSWER:—The colt of yours may be a ridgling, or may not be. In the latter case the testicle is lodged in the abdominal ring, and can be removed by an expert operator in the usual way. If a ridgling or real cryptorchide, the testicle is in the abdominal cavity, and to remove it requires an opening of that cavity, an operation which is not without danger. Your mule probably suffers from what may be called a "summer eruption," which will disappear when colder weather sets in. Good grooming and food easy of digestion are advisable. If the cutaneous eruption is very troublesome, a mild physic may cause considerable improvement.

SUGGESTION FOR A SUMMER TRIP.

If you wish to take the trip of a lifetime, purchase the low rate excursion tickets sold by all principal lines in the United States and Canada via the Northern Pacific Railroad to Yellowstone National Park, Pacific coast and Alaska.

The trip is made with the highest degree of comfort in the elegant vestibuled trains of the Northern Pacific Railroad, which carry dining cars and luxurious Pullman sleeping cars from Chicago, St. Paul and Minneapolis to Montana and the Pacific coast, without change, and special Pullman sleepers from St. Paul and Minneapolis to Yellowstone Park.

The scenery en route is the most magnificent to be found in the seven states through which the road passes. Beautiful mountains, rivers, valleys, lakes and plains follow each other in rapid succession to delight the tourist, who will also find interest in the agricultural, mining, lumbering, industrial and other interests associated with the development of the great Northwest.

The crowning glory of the trip through the Northwest, however, is the visit to Yellowstone Park, the land of hot springs, geysers and gorgeous canons, and to Alaska with its endless ocean channels, snow-capped peaks, Indian villages and giant glaciers.

If you wish to investigate this suggestion further send to Charles S. Fee, General Passenger Agent, N. P. R. R., St. Paul, Minn., for copies of the handsomely illustrated "Wonderland" book, Yellowstone Park and Alaska folders.

When you have tried the free package of Frank Siddall's soap and found it saves you a large amount of labor, then tell your neighbors and friends to write us a postal for a free trial package just as you did. We want to introduce it in every household. See page 7.

WATCHES FREE To Boys and Girls. Address MILLER TEA CO., 174 Ontario St., Cleveland, O.

AGENT made \$71 in four days selling my Electric Corsets and Specialties. 100 PER CENT. profit and Cash Prizes. Sample free. Dr. Bridgman, B'way, New York.

\$5. AN HOUR made taking measures for
Pants to order - - \$3. }
Suits to order - - \$15. } up-
Overcoats to order \$12. } wards
We want an Agent in every town.
Write for terms to sell goods every man must have. Address
HUNTER MFG. CO., CINCINNATI, O.
LARGEST TAILORING FIRM IN THE U. S.
If in need of clothing write for samples and rules for self-measurement.



FREE.

Our large 24-page Catalogue, profusely illustrated, full of information on the proper construction of Pianos and Organs. We ship on test trial, ask no cash in advance, sell on instalments, give greater value for the money than any other manufacturer. Send for this book at once to
BEETHOVEN ORGAN CO.
WASHINGTON, N. J.
P. O. Box

THIS PAPER One Year Free

To any one sending us only one NEW yearly subscriber at the regular price, 50 cents, for the paper alone.

This offer is good now under the following conditions:

The NEW subscriber must be a person whose name is not now on our list, and must be a person whom you have sought out and solicited to take the paper and who has consented to receive it. A change from one member of a family to another is not securing a NEW subscriber.

The new subscriber will receive the paper a full year for the regular subscription price, 50 cents, but will not be entitled to any present or premium with it except upon payment of the full "Price, including one year's subscription." For example: Premium No. 539, Perfection Hammock, and this paper one year for only \$1.50; or, "Uncle Tom's Cabin" and this paper one year for 60 cents.

Send us a new subscriber under these terms and we will send you the paper free for one year as your reward.

This offer must not be combined with any other, and applies to this paper only.

Accept it now, while it is good. It may be withdrawn.

We have an office at 927 Chestnut Street, Philadelphia, Pa., also at Springfield, Ohio. Send your letters to the office nearest to you and address

FARM AND FIRESIDE.
Philadelphia, Pa., or Springfield, Ohio.

Our Miscellany.

PANSIES.

Their plates of satin foil
Are shimm'ring purple, pearl-rust,
And azure, growing blue
Through depth on depth of sapphiric-dust.

Their cups of odored sweets,
Distilled from perfumed, dewy showers,
With how'ring incense fill
The joyous summer-bounding hours.

Their faces seem to ask
The questions of our fuller thought,
And, poised in outlined grace,
Each pansy some sweet hope has caught.

In glowing, fibered tone,
Their hidden, deep-stirred music darts,
Like sun-rays of the morn,
Through parted lips and open hearts.

Sweet "thoughts" in color clothed—
Each petal a melodious fifth
Of scent and form and tone—
The gods could send no richer gift!
—Andrea Hofer, in Goodform.

NEW ORLEANS has an area of 227 square miles, and covers more ground than any other city in the United States.

MOTHER—"Johnny, are you teaching that parrot to swear?"

Johnny—"No'm; I'm just telling it what it mustn't say."

MANY a farmer fails because he is not fitted to superintend hired labor, and yet will not recognize the fact. Lots of men succeed when they find the work that they and their family can do well, and fail when they try to hire men to help do twice as much.—Rural New-Yorker.

THE work of assigning space to the thousands of exhibitors in the various world's fair buildings has been entered upon, and will be pushed to a finish as rapidly as possible. As much more space has been applied for than is available, it will be necessary to scale down the requests of a majority of the applicants.

At a dairy convention in New York state the following item was brought out showing the value of "organization." In Erie county there were twenty-five cheese factories, which, by combination, have employed an instructor, and "every cheese in the whole twenty-five factories is as nearly like every other one as one Canada pea is like another." Uniformity in product increases the value and the profit every time.

"You know, Dorothy, these biscuits of yours," he began, as he reached across the breakfast-table and helped himself to the seventh.

"Yes," said his wife, with a weary, feeble smile.

"Ah! they're nothing like mother's."

"No?" And the smile was gone.

"No. Not a bit. You see, mother's were heavy and gave me the dyspepsia, while yours are as light as a feather, and I can eat about—why, what's the matter, Dorothy?" She had fainted.

THE chief motive power for the machinery at the Columbian exposition will be supplied by a gigantic engine, to be furnished free to the exposition by the E. P. Allis Company, of Milwaukee. The engine will be furnished as a part of the company's exhibit, upon a special contract providing that it shall be used for the motive power, and that no other engine of equal size shall be exhibited. It will be an engine of the quadruple expansion type, and of between 3,500 and 4,000 horse-power. Compared with this engine, the big Corliss that was exhibited at the Centennial exposition is almost a dwarf. In 1876 the Corliss was considered one of the wonders of the exposition, but its builder rated it at only 1,400 horse-power, or less than half of the one being built by the Allis company. The Allis exhibit represents an outlay of \$175,000.

Two of the cannon which, it is believed, were at one time mounted on board Christopher Columbus' flagship were received at Chicago recently. The cannon are of the ancient and clumsy pattern of such guns turned out in the fifteenth century. Nothing but the body of the guns remains, the woodwork, of course, having rotted away centuries ago. The guns themselves are almost worn to pieces, and are not much more than huge chunks of rust. Indeed, the cannon are put on the "scrap-iron" list in the custom-house papers. These historic old pieces have been secured for exhibition at the world's fair. One of the naval officers who was detailed for work in connection with the Columbian exposition found the relics at one of the West Indian islands. Tradition and substantial proof showed that the cannon had been used in a fort erected by Columbus' son, and that they were brought from Spain with Columbus' fleet. The ruins of the fort are still to be seen.

DON'T TOBACCO SPIT YOUR LIFE AWAY

Is the startling, truthful title of a little book just received, telling all about *Notobac*, the wonderful, harmless, economical, guaranteed cure for the tobacco habit in every form. Tobacco users who want to quit and can't, by mentioning FARM AND FIRESIDE can get the book mailed free. Address THE STERLING REM-EDY CO., Box 778, Indiana Mineral Springs, Ind.

Only \$100 For

a TOWN LOT with

\$300,000.00 Worth of Mineral

UNDER IT.

I can sell you a town lot with (\$300,000.00) Three Hundred Thousand Dollars worth of mineral under it, for the small sum of One Hundred Dollars, and the money you pay for the lot will be used towards erecting immense factories, which will employ thousands of workmen, and thus cause the town lot you purchase to become very valuable in a short time, because a city is growing up on this land. This is a chance seldom offered, the one opportunity of a lifetime, therefore these town lots are selling rapidly, and it will be necessary to apply at once if you wish to take advantage of this unusual opportunity for a safe and profitable investment. If you wish further particulars, address

N. S. PERRY, Springfield, Ohio.

BRUSH CLOTHES FREQUENTLY.

Clothes of wool which are rarely brushed and never hung out of doors soon come to have an appearance of long use, when the same clothes, if carefully brushed every time they are worn and frequently hung out of doors, will always be fresh and will keep their good looks very much longer.

Care should be used to select a brush broom or whisk of fine broom-corn. It will cost more than the coarser ones, but in the end will be a saving, as the coarser ones wear the clothing more rapidly.—Housekeeper.

LATER NEWS.

Upon the recent death of an eminent English divine at Cannes, the following bulletin was placed by the family upon the door of his late residence:

"Mr. S— departed this life for heaven at eleven o'clock A. M."

Some passing wag, possessed of more drollery than reverence, placed beneath the notice a telegraph blank filled out in the following manner:

"HEAVEN, 12 M.—Mr. S— not yet arrived. Getting uneasy.—PETER."—Life.

GINSENG CULTURE.

Ginseng is largely exported from the United States to China, where it is held in high esteem as a curative agent. It grows wild in our country, from Canada to the southern states, and west to the range of the Rockies.

Ginseng is a native of moist, fertile soil in woods, where shade and damp atmosphere are steady conditions. It will not grow in the direct rays of the sun or in old soil. I am transplanting the roots, planting the seed and cultivating them with perfect success in the forest, where the plants receive their natural protection by the leaves falling from the trees on the ground, keeping the roots from freezing in the winter. The leaves, while on the trees during the summer, protect the plants from the direct rays of the sun. Yet I claim that ginseng can be cultivated with success in open fields. First, by mixing wild earth from the woods with the old soil until it becomes the same as new; second, cover the roots with leaves during the winter; third, make a covering over the plants in summer that will let the rain through, giving them a similar natural protection.

I cultivate the plant from the seed three years, the yield being at the rate of 1,000 pounds (dry root) per acre. I cultivate the plants from the roots I transplant from two to four years, the gain in weight on one pound of roots being at the rate of ten pounds in four years. The dried roots are worth from \$3 to \$4 per pound in New York City.

I fertilize my plants, but never plow them. It requires but little labor to prepare the ground and to cultivate the plants. Besides, ginseng is a sure crop and ready sale. When I dig a crop, I take off the main root for market, and transplant the same plant or stalk, which gives me another crop of roots in three years, and a seed crop every year.

My plants are making a good show. I have hundreds of fifteen and twenty leaf plants; some twenty-five and a few thirty leaf plants. They promise a fine seed crop and are the admiration of all who see them.—J. W. Sears, in Commercial-Gazette.

OUR CLUBBING LIST.

We will receive subscriptions for any of the following publications, together with the FARM AND FIRESIDE, at price named in the last column of the table below. The price includes both papers one year.

NAME OF PAPER.	PUBLISHERS REGULAR PRICE.	OUR PRICE WITH F. & F. ONE YEAR.
Arthur's Home Magazine.....m	\$1.50	\$1.25
New York Sunday Mercury.....w	2.00	1.50
The American Analyst, New York.....w	1.00	1.00
The Domestic Monthly, New York.....m	1.00	1.50
National Illustrated Magazine.....m	.50	.50
Agents' Herald, Philadelphia, Pa.....m	.50	.50
Svenska Tribunen, Chicago, Ill.....w	2.25	2.10
Appeal-Avalanche, Memphis, Tenn.....w	1.00	1.00
Buffalo Express, Sunday edition.....w	2.00	1.50
New York World.....w	1.00	1.10
Omaha Bee.....w	1.00	1.00
Union Signal, new subscriptions only..w	1.00	1.00
Atlanta Constitution.....w	1.00	1.10
St. Louis Republic.....w	1.00	1.00
Detroit Tribune.....w	1.15	1.00
The Old Homestead.....m	.50	.75

WHAT THEY SAY.

No doubt many of our friends in reading our magnificent bargains in watches, have wondered whether watches at such prices could be really good. While we guarantee them to be just as represented, it will be more satisfactory to many to know what is said by those who are now carrying watches they have bought from us. It is with pleasure that we receive such testimonials as the following:

PRINCETON, IND., June 17, 1892.

Our confidence in you has been more than sustained. I am highly pleased with your Nos. 360 and 358. They are beauties and accurate.

M. E. CARUTHERS.

POTTS CAMP, MISS., June 19, 1892.

Watches received. No. 360 is a perfect beauty. My wife is highly pleased with it, and would not take \$10.00 for her bargain above cost. Any one wishing a good watch may be assured they will be more than satisfied with the investment in No. 360.

J. O. HUTCHESON.

FORT ATKINSON, WIS., June 17, 1892.

The watch received, and I find it as represented. Would not take \$10.00 more than it cost if I could not get another at the same price.

M. S. MOSES.

FORT COLLINS, COL., June 13, 1892.

The watch came all O. K. I am well pleased with it—more so than I expected. I cannot say too much in its praise. I took it to a first-class watchmaker, and he said he could sell me the same watch for \$26.00.

H. A. DAWLEY.

Mr. Dawley purchased No. 358 for \$15.50, saving just \$10.50 by buying from us.

ENSEE, OHIO, June 1, 1892.

I received the three watches and found them just as represented. Any person wishing a good time-piece will do well to order of you. Thanking you for your honorable dealing, I remain,

Yours respectfully,

LEWIS HUNT.

LUNDVILLE, OHIO, June 11, 1892.

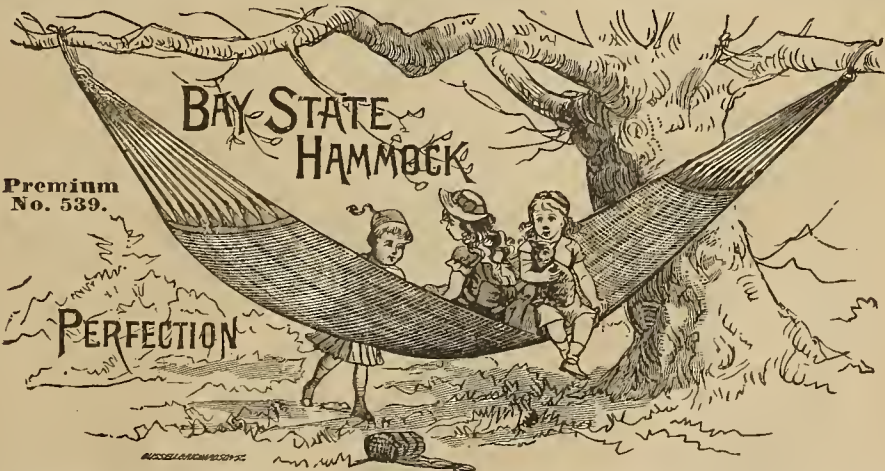
The watch came all right. Am much pleased with it. In quality and beauty it exceeds my expectations.

J. W. BEABOUT.

We are still able to furnish any of the watches offered in previous numbers of this paper, at the remarkably low prices given, and trust many more of our readers will avail themselves of this opportunity and secure for themselves the best watches in the world at these low prices. Our watch circular will be mailed free to all who ask for it. Address FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

Send for free trial package of soap as offered on page 7. You need not heat up your house by boiling the clothes, and the fuel saved pays for the soap. The trial package is sent free.

A PERFECTION, CLOSE-WOVE HAMMOCK \$1.50
Together with this paper one year, for only



Cool and comfortable, strong; closely woven instead of knit, it cannot catch and pull off the huttons. It is 11 feet long, 3 feet wide, and will easily sustain the weight of the heaviest person, and withstand the strain of 400 or 500 pounds. Has patent iron ends.

Given as a premium for 6 subscribers to either the Farm and Fireside or the Ladies Home Companion, at 50 cents each.

Price, including one year's subscription to either paper, \$1.50.

We offer it for sale for only \$1.35. Postage or express paid by us in each case. Give your express station if different from post-office address.

FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

A LAZY BOY.

"That boy of mine don't earn his salt!" exclaimed Farmer Sassafras indignantly, when he returned from holding down a cheese-box at the corner grocery. "I told him to milk the cows, slop the pigs, weed the onions, put up the sheep, feed the horses, cut the kindlin' wood, draw the water and get the meat for breakfast, an' here the good-for-nothin' rascal has finished up and gone to bed without waitin' to put my horse in the stable."

A holder for the crochet lace which is so popular at present may be made in the following manner: Cut from pasteboard four stars about four inches in diameter from point to point, and cut a square from the center of each. Cover each piece with white linen, and sew each two together over and over, having previously worked two of the covering pieces with some pretty design in silk, for the outsides. Inch-wide ribbon passed through the center of each star will serve to wind the work upon, and tying the ends together will hold it securely.

Keystone Cider Mills

Do more work, and from the same amount of pulp produce MORE CIDER than any other Mill made.

Work Rapidly.
Run Easily.
COST LESS.
Send for circular.
KEYSTONE MFG. CO.,
Sterling, Ill.

CLEVELAND OR HARRISON!
To immediately introduce our large illustrated catalogue of Campaign Badges, Emblems, Watches and Jewelry, we will send an Elegant Gold Plated CAMPAIGN BADGE FREE of all cost providing you send two stamps to pay the postage. State which one you want. Free offer limited to ones willing to show our goods. WILLIAMS, 125 S. Halsted St., Chicago, Ill.

HALF RATE HARVEST EXCURSIONS
TO Arkansas, Louisiana, Texas, Kansas, Nebraska, Colorado, Utah, Oklahoma, Indian Territory and other Western and South-western States via MISSOURI PACIFIC RY.

And IRON MOUNTAIN ROUTE.

Tickets on sale at any coupon office in U. S. or Canada, on special dates in August, September and October. For particulars enquire of your nearest agent.

H. C. TOWNSEND, G. P. & T. Agt., ST. LOUIS, MO.

Smiles.

THE A-D-V.

There are three little letters
That are used on every day;
In every publication
With undisputed sway.
They are so very modest
Ne'er prominent they'll be,
But 'way down in the corner
Lurks the a-d-v.

You read about a shipwreck,
A hundred people drowned;
The wreckage of the noble ship
For miles is strewn around.
Your heart then swells with pity
For those upon the sea,
Until you read on further
To the a-d-v.

Or perhaps upon a railroad
You'll read of a big smash,
And many people injured
In the overwhelming crash.
You wonder if some relative
Upon the train could be,
Then you kick yourself, because
You see the a-d-v.

And then a tale of sorrow,
Of sickness and of pain;
Of how John Smith, of Bungtown,
Could not get well again
He lost all hope of living;
At death's door then was he,
Until he took a bottle of—
Oh, hang that a-d-v.

Sometimes they try to hide it,
And little * they use;
While others sign "Ex" to it
To make it look like news.
No matter what they put there,
It's plain enough to see
It is the same old chestnut,
That little a-d-v.

And so you find it daily;
Into everything it lurks;
'Tis seen in every paper,
And ne'er its duty shirks.
To tell the truth, dear reader,
And we laugh aloud with glee,
This poetry's not paid for,
Its an a-d-v.

—E. D. Gibbs.

WOMAN'S CHANGING FASHIONS.

When hoops were worn by women fair,
A nuisance they were found;
One ran against them everywhere,
The hoops were always round.

And they retarded, it was clear,
The rise of womankind,
For by the fashion to her sphere
Each woman was confined.

When hoops went out, by some cracked brain
The bustle was designed,
And woman's fashions, it was plain,
Were getting quite behind.

The bustle also saw its day,
Though to it they adhered
For years, and when it passed away
The clinging dress appeared.

And as it suited old and young,
'Twas worn without demur;
To fashion women long had clung,
Now fashion clung to her.

In time the train became the style,
And every woman wore it;
In fact, the fashion for awhile
Swept everything before it.

And thus the years new fashions bring
Which flourish and decay;
The corset is the only thing
That ever came to stay.

—Yarmouth Register.

BIRTH OF A CHILD'S DIMPLE.

I spoke of the rose leaf within her chin,
And she said with a little nod,
As she touched a dimple as sweet as love,
"Oh, that was a kiss from God."

—Ella Higginson, in Detroit Free Press.

A WORD OF CAUTION.

A certain small Tom was going out to luncheon by invitation. His mother was anxious that he should behave well, but wisely recalling that simplicity is the essence of all true politeness, gave him but one caution.

"Act, Tom, as if you were at home; take what you want with a 'Yes, please,' and decline anything with a polite 'No, thank you,' be as honest as at our own table," trusting that with his confidence established, the continual home sowing of precept and example would bear its fruit.

At night Tom reported results.
"I guess I did all right, mother," he said, "though I got a laugh on me once."

"What was that?" asked his mother.
"Well, we had baked apples, and when it came my turn to be served Mrs. C. said:

"Now, Tom, which apple do you want?"
"You told her, of course," interpolated his mother, as the boy hesitated a little. "You know I have often explained that it is good manners to give a choice when one is asked."

"Yes, mother, I told her, and that was the laugh. I said:
"The one I want is gone."

DIDN'T WANT A PONY.

"Papa," says the small boy, "Willie Winkers has got a pony."
"Has he?" says papa.
"Yes, and it's the bee-utafulist pony I ever saw."
"You don't say!"
"Just as gentle as can be. I rode on it and didn't fall off once. A boy couldn't get hurt on that pony."
"I suppose not."
"It eats hardly anything, too, and doesn't cost much to keep."
"It doesn't?"
"Not anything hardly. Willie said his papa bought it real cheap."
"No doubt."
"And he said there was plenty more where that came from."
"Humph! Do you want me to buy you a pony?"
"N-o. I was only thinking what a nice pony Willie Winkers has."
"Oh!"
"Yes. Willie has got a nice papa, too, hasn't he?"

SOME QUEER WANTS.

Wanted—A skilful dentist to fill the teeth of a gale.
Wanted—A cook to prepare dinner on a mountain range.
Wanted—A stand-up collar for the neck of the woods.
Wanted—A hat to fit the head of the Missouri river.
Wanted—A set of artificial teeth for the mouth of the Mississippi.
Wanted—A crown for the brow of a hill.
Wanted—A snug-fitting shoe for the foot of a mountain.
Wanted—Several hundred women to scour the country.
Wanted—An energetic barber to shave the face of the earth.
Wanted—A lady to wear the cape of Good Hope.
Wanted—Locks for the Florida Keys.
Wanted—A wise man to teach the Silly islands.
Wanted—Some one to love the river Darling.

THE LANGUAGE WAS TOO HIGH.

The Lewiston, Me., Journal tells this story about a somewhat illiterate Maine woman who had just returned home after a visit to New York:

"Oh," she said to a friend, "I had such a perfectly lovely time, everything was so convenient, you know. We stopped in a house where we rode up to our room in a refrigerator, and I always had my washing done at the foundry right in the house. It was awful nice. Then there weren't no stove and no clutter in the rooms. Then there was one of these legislators right in the floor, and the heat poured right up through."

"How did it happen that you came back so quickly?"

"Oh, well, you see, Sairy didn't have no appetite. I had the hardest time to get her anything she could realize. Honestly, when I got her home she was almost an individual."

TWO PAPAS.

Wee hostess—"Mamma, shall I invite Lucy Littnay to my party?"
Mamma—"Certainly, she is the minister's daughter."
"Do minister's daughters get invited everywhere?"
"Always."
"They has lots of fun, I guess. I wish my papa was a minister 'stead of a mis'able sinner."

A COMPLIMENT ON ICE.

Mrs. Gadd—"You do not show your age at all."
Mrs. Gabb (delighted)—"Don't I?"
Mrs. Gadd—"No; I see you've scratched it out of your family Bible."—New York Weekly.

Pleasant, profitable employment is offered every energetic person in introducing our world-famous picture, "Columbus at the Royal Court of Spain," in their neighborhood. See our grand offer in the July 1st issue, or write us for full particulars. Also read page 11.

HOME STUDY. It will pay every young man and woman to secure a good Business Education in Book-keeping, Shorthand, etc., by Mail at their own homes. Low rates and success assured. Gives a practical business training that every one needs. Catalogue and Trial Lesson free. Write to: Bryant & Stratton, 449 Main St., Buffalo, N. Y.

SYLPH CYCLES RUN EASY
Hollow Tires. Perfection of cycle manufacture; no need now to ride springless cycles or depend on tires alone for comfort. Sylph Spring Frame. Vibrates. Light, simple, strong. Catalogue free. House-Durjoy Co., 32 E. St., Peoria, Ill. AGTS. WANTED

FOR SUMMER COMPLAINTS
PERRY DAVIS' PAIN-KILLER
BEST MEDICINE IN THE WORLD.

A PRESENT.

SEND us your address and we will make you a present of the best Automatic WATCH MACHINE in the World. No wash-board or rubbing needed. We want you to show it to your friends, or act as agent if you can. You can COIN MONEY. We also give a HANDSOME WATCH to the first from each county. Write quick. Address: N. Y. LAUNDRY WORKS, 80 Murray Street, N. Y.

LADIES WHO WILL DO WRITING

The tremendous sale of my preparation, Gloria Water, has so increased my correspondence that I will guarantee good wages to ladies who will do writing for me at home. Address in own handwriting MISS EDNA L. SMYTHE, Box 1101, South Bend, Ind. Mention paper.

500 SCRAP CAMPAIGN

FREE
BADGE, gold plated, Card Agt's Outfit & Present 4c. Tuttle P. Co., No. Haven, Ct

YOUR NAME ON 25 ENAMELED ELITE CARDS (new)
10 cents. 500 Samples of Silk Ribbon, Silk Fringe, Rosette Cards, Tricks, Games, Songs and Acrostic Complete Outfit for 1892, 4 cts. CROWN CARD CO., CADIZ, OHIO.

Ohio Electric Co., Cleveland, want agents, Cat. free.

RUBBER STAMPS. Best made. Immense Catalogue Free to agents. The G. A. HARPER MFG. CO., Cleveland, O.

WATCH FREE—If you want one send a stamp to the National Illus. Magazine, Washington, D.C.

QUIT AR self-taught without notes: 24 charts 50c. BANJO without notes: 80 pp., 100 pieces \$1. Cir. & cat. of inst's free. E.C. HOWE, 85 Fifth av, Chicago

FLYING MACHINE Amusement for everybody. All want it. Be the first. By mail, 10c. COE MANUFACTURING CO., St. Louis, Mo.

6th and 7th Books of Moses, Albertus Magnus, Long Lost Friend, Mineral Rods and Dip Needles. B. G. Stauffer, Bachmanville, Pa.

BICYCLE TO BOYS AND GIRLS UNDER 18 YEARS OF AGE, ON EASY CONDITIONS WITHOUT ONE CENT OF MONEY. Western Pearl Co., 334 Dearborn St., Chicago, Ill.

BEST PAYING THING for Agents is our PHOTOGRAPH FAMILY RECORD PICTURE. We give you liberal terms. Address Dept. W. C. P. CORY & CO., 41 to 45 Jefferson St., Chicago.

AGENTS WANTED ON SALARY or COMMISSION, to handle the New Patent Chemical Ink Erasing Pencil. Agents making \$50 per week. Monroe Eraser Mfg Co. x 98, LaCrosse, Wis.

CUT THIS OUT and send with your name and express office address and we will send you free to examine and wear, a SOLID GOLD finished watch that you can sell for Ten Dollars. If it suits, you send us Four Dollars and express charges; if not, return it to me. Mention whether Ladies' or Gents' size is desired. W. S. SIMPSON, 37 College Place, N. Y.

CUT IN TWO Prices of Sewing Machines, Safes, Scales, Blacksmith's Tools, Road Carts, Buggies, Harness and 1000 other things. List Free. CHICAGO SCALE CO., CHICAGO, ILL.

\$525 Agent's profits per month. Will prove it or pay forfeit. New articles just out. A \$1.50 sample and terms free. Try us. Childster & Son, 28 Bond St., N. Y.

AGENTS WANTED to sell 15 fast selling articles, send stamp for terms and sample quick. RATH & CO., 325 KING STREET, POTTSTOWN, PA.

NOVELTIES AGENTS FOR Convertible Wire Baskets, Handy Button, Self-threading Needle & many others. Catalog sent free V. Cassgreen Mfg. Co., 134 Van Buren St., Chicago, Ill.

HERE We will present a nice typewriter to each of the first 20 and last 10 persons sending us 25c. silver for our "How to make money fast," before Aug. 15, 1892. Isaac Williams & Co., Lock Box 944, Alliance, O. Mention this paper when you write.

CUT THIS OUT and return it to us with 10c silver or stamps, and we will insert your name in our Agents' Directory. You will get thousands of Papers, Cards, Magazines, Novelties, etc., from publishers and manufacturers who want agents. DON'T MISS THIS. Address WESTERN MAIL CO., St. Louis, Mo.

AGENTS Coin Money selling Beveridge's Automatic Cooker. Every woman buys. Best and cheapest cooker sold. Big Profits to good workers, male or female. Sample's weight 12 oz. Adv'g matter furnished. For circulars address W. E. BEVERIDGE, Baltimore, Md. Mention this paper when you write.

BICYCLES GIVEN AWAY For a few hours active labor. Send 25c. for "The Modern Queen," 16 pages, 64 column Illus. Magazine. 6 mos. on trial and full particulars. Modern Queen Co., 100 Center St., New Haven, Ct. Mention this paper when you write.

WE WANT YOU To act as our agent. We will treat you well and pay liberally for your services. The work is easy, pleasant and adapted to both young and old of either sex. GEO. STINSON & CO., Box 154, Portland, Me.

\$30 to \$50 A WEEK I WANT an honest, earnest man or woman in every county to take the sole agency for an article that is needed in every home and indispensable in every office. SELLS AT SIGHT, in town or country. You can make \$700 in three months, introducing it, after which it will bring you a steady income. Splendid opening for the right person. Don't lose a moment. Good jobs are scarce and soon taken. Write at once to J. W. JONES, Manager, Springfield, Ohio.

\$5 to \$15 per day, at home, selling LIGHTNING PLATER and plating jewelry, watches, tableware, &c. Plates the finest of jewelry good as new, on all kinds of metal with gold, silver or nickel. No experience. No capital. Every house has goods needing plating. Wholesale to agents \$5. Write for circulars. H. E. DELNO & Co., Columbus, O.

WORK AND PAY. Money made easily, more money made with a little effort, big money made by energy and business push, is the song of agents who are selling our picture, "Columbus at the Royal Court of Spain." Some are making as high as \$20.00 a day, but that means work. "Keeping everlastingly at it brings success." Work on this plan and success awaits you. See our grand offer in the July 1st issue; it is good now. See page 11 of this issue, also.

ALL GOODS ON TRIAL ON EASY CONDITIONS. CATALOGUES FREE. Write at once to HOLLY WATCH CO., Jersey City, N. J.

MISS BEACH'S Curling Fluid. Keeps the hair in curl for days innocent as cologne. A toilet necessity. Not sent on trial.

30,000 Ladies Have Endorsed It At druggists, or prepaid, 50c. LADY AGENTS wanted, DENISON CHEMICAL CO., 56 (G) LaSalle St., Chicago, Ill. Mention this paper when you write.

PARKER'S HAIR BALM Cleanses and beautifies the hair. Promotes a luxuriant growth. Never Fails to Restore Gray Hair to its Youthful Color. Cures scalp diseases & hair falling. 50c. and \$1.00 at Druggists

ARE YOU CONSUMPTIVE Use Parker's Ginger Tonic. It cures the worst Cough, Weak Lungs, Debility, Indigestion, Pain, Take in time. 50 cts.

FREE. SUPERB FORM. LOVELY COMPLEXION. PERFECT HEALTH. These are my portraits, and on account of the fraudulent air-pumps, "wafers," etc., offered for development, I will tell any lady FREE what I used to secure these changes. HEALTH (cure of that "tired" feeling and all female diseases) Superb FORM, Brilliant EYES and perfectly Pure COMPLEXION assured. Will send sealed letter. Avoid advertising frauds. Name this paper, and address Mrs. ELLA M. DENT, STATION B, San Francisco, Cal.

GUARANTEED CURE OR NO PAY. Nothing Fairer Than This. When we say cure, we do not mean simply to stop it for the time being, but a

PERMANENT AND POSITIVE CURE For Rheumatism, Neuralgia, Dyspepsia, Headache, Constipation, Biliousness, Nervousness, Sleeplessness, Impure Blood, and all diseases arising from a disordered Liver. Write for Treatise, Testimonials, and Free Sample Bottle of

DR. ROC'S LIVER, RHEUMATIC, and NEURALGIA CURE to CULLEN & NEWMAN, 136 GAY ST., Knoxville, Tenn.

DROPSY TREATED FREE. Positively CURED with Vegetable Remedies. Have cured many thousand cases called hopeless. From first dose symptoms rapidly disappear, and in ten days at least two-thirds of all symptoms are removed. BOOK of testimonials of miraculous cures sent FREE. 10 DAYS TREATMENT FREE by mail. Dr. H. H. GREEN & Sons, Specialists, ATLANTA, GA.

PARTIAL DEAFNESS. THE SOUND unaided to help a larger per cent. of cases than all similar devices combined. The same to the Ears as glasses are to the Eyes. Positively invisible. Worn months without removal. H. S. WALES, BRIDGEPORT, CONN.

Fat People You can reduce your weight 10 to 15 lbs. a month at home without starving or injury by Dr. Clarke's Home Treatment. Proofs, Testimonials Free. F. B. Clarke, M. D. Drawer 133, Chicago, Ill.

YOUR BLADDER Troubles you, if you are an Old or Middle Aged Man. Complete list of symptoms furnished on application. Also the best method of cure. Inclose stamp to W. H. Barsby, Marshall, Mich.

FAT FOLKS Reduced 15 lbs. a month. Any one can make remedy. Safe and sure. Particulars 2c. P. O. Box 404, St. Louis, Mo.

HEADACHE Cured in 15 minutes. Trial package FREE. CHASE REMEDY CO., Chicago.

OPIUM Morphine Habit Cured in 10 to 20 days. No pay till cured. Dr. J. Stephens, Lebanon, O.

RUPTURE Positive Cure. By mail. Send for circular. Address Capt. W. A. Collings, Smithville, Jefferson Co. NY

OPIUM or Morphine Habit Cured at Home. Trial Free. No Pain. Comp'd Oxygen Ass'n, Ft. Wayne, Ind.

CANCER AND TUMORS scientifically treated and cured. No knife. Book Free. Drs. GRANTON & NORRIS 163 Elm Street, Cincinnati, Ohio.

FREE Sufferers from Rupture, Rheumatism, Piles, will receive a free treatise on how to cure themselves promptly and permanently without truss, and without pain. D. Lutz, P. O. Box 619, Somerville, N. J., U. S. A.

CANCER Killed in the Blood, before it fully develops DR. KISTLER, Columbus, O.

VARICOCELE We will send you the MARVELOUS French remedy CALTHOS free. It is an absolute and permanent cure. Use it and pay if satisfied. Address Von Mohl Co., Sole Agents, Cincinnati, O.

PILES Remedy Free. INSTANT RELIEF. Final cure in 10 days. Never returns; no purge; no salve; no suppositor. A victim tried in vain every remedy was discovered a simple cure, which he will mail free to his fellow sufferers. Address J. H. REEVES, Box 3290, New York City, N. Y.

DEAFNESS & HEAD NOISES CURED by Peck's Invisibile Tubular Ear Cushions. Whispers heard. Successful when all remedies fail. Sold only by F. Hiscox, 853 B'way, N. Y. Write for book of proofs. FREE

RUPTURE Positive Cure. By mail. Sealed Book Free. Address Dr. W. S. Rice, Box F, Smithville, N. Y.

A SURE and permanent cure for Epilepsy. Fits in 24 hours. Free to poor. A. A. Ferdinand, St. Louis, Mo.

Gleanings.

A Japanese girl is learning dentistry in Chicago.

New Hampshire has three women treasurers of savings-banks.

An ingenious watchmaker in Nuremberg, Bavaria, has invented a device which displays on the face of a clock, one hour before it is about to run down, the warning word, "Wind."

An eminent writer contends that the ancient practice of hand shaking was originally suggested by the wish to ascertain the wrist power and consequent wrestling capacity of a stranger.

Burglar-proof glass has been invented by a Dresden manufacturer. It is made by pouring molten glass over a network of steel wire. It is especially adapted for skylights and jeweler's windows.

For a tea dish, when fruit is scarce, take one quart of rich milk, one cupful of sugar, a small piece of butter and a tea-spoonful of almond flavoring. When boiling, thicken with corn-starch and two cupfuls of stoned dates. Set on ice. Ice the top and ornament with dates.

The memoirs of Prof. Maria Mitchell, the famous woman astronomer of Vassar, are to be written by her sister. Among the more distinguished pupils of Miss Mitchell's teaching is Prof. Susan J. Cunningham, the well-known professor of astronomy at Swarthmore college.

There is one vocation particularly fitted to a woman who has deftness and skill combined with artistic taste. This vocation is to furnish floral and table decorations for elegant entertainments. One woman on the Pacific coast has built up a successful and flourishing business during the past six years.

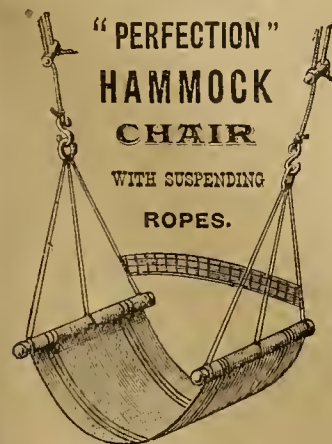
One of the most singular looking creatures that ever walked the earth or "swam the waters under the earth" is the world-famous man-faced crab, of Japan. Its body is hardly an inch in length, yet the head is fitted with a face which is the perfect counterpart of that of a Chinese cooly, a veritable missing link, with eyes, nose and mouth all clearly defined.

In Buffalo a woman runs a street-cleaning bureau; in Kansas City a woman is in the fire department; at Vassar a young woman combs hair at twenty-five cents a head; a Louisville lady makes shopping trips to Paris; another in New York makes flat furnishing a business; still another in New Hampshire is president of a street railway company, while Chicago has a woman embalmer.

Clara Louise Kellogg tells a story in which her mother, herself and the dowager duchess of Somerset figure. The singer and her mother were dining with that lady when the duchess calmly poured her tea into her saucer, sipped it with great enjoyment, and remarked, "Now, ladies, do not think this is rude, for I have just come from the queen and saw her do it. Let us emulate the queen." Whereupon all drank their tea from their saucers.

WHEN THE MUCUS SURFACES of the Bronchia are sore and inflamed, Dr. D. Jayne's Expectorant will afford prompt relief. For breaking up a cold or subduing a cough, you will find in it a certain remedy.

See in our offer in July 1st issue how you can secure the beautiful picture, "Columbus at the Royal Court of Spain," in a rich, heavy 6-inch gold frame for only \$1.50. Also read the offer on page 11 of this issue.



This hammock chair is a luxury for hot weather. It can be instantly hung from a tree or arbor and combines the features of both hammock and swing. We send it complete with ropes, hooks and slips which adjust it to any height. It will hold a grown person and is a delight to the children.

Premium No. 541. Given as a premium for 3 subscribers to either the Ladies Home Companion or Farm and Fireside at 50 cents each.

Price, including one year's subscription to either paper, \$1.
We offer it for sale for only 75 cents. Postage or express paid by us in each case. Give your express station if different from your post-office address.

FARM AND FIRESIDE,
Philadelphia, Pa., or Springfield, Ohio.

Recent Publications.

HOW TO CO-OPERATE.—The full fruits of labor to producer, honest value to consumer, just return to capital, prosperity to all. A manual for co-operators. By Herbert Myrick. Price \$1.50. Published by Rural Publishing Company, New York.

EXPERIMENT STATION BULLETINS AND GOVERNMENT PUBLICATIONS.

Sent free, on application, to residents of the state in which the station is located. Address Agricultural Experiment Station.

CALIFORNIA.—(Berkeley) Alkali lands, irrigation and drainage in their mutual relations.

CONNECTICUT.—(New Haven) Bulletin No. 112, June, 1892. On the Gunning-Kjeldahl method and a modification applicable in the presence of nitrates.

INDIANA.—(La Fayette) Bulletin No. 40, June, 1892. The silo and silage in Indiana.

MASSACHUSETTS.—(Amherst) Bulletin No. 42, June, 1892. Feeding experiments with milch cows.

MINNESOTA.—(St. Anthony Park) Bulletin No. 20, May, 1892. Fertilizers. Improvement of timothy. Rape in Minnesota. Peas and oats. Field-peas. Bulletin No. 21, June, 1892. Sugar-beets and sorghum.

NEW YORK.—(State Station, Geneva) Bulletin No. 40, March, 1892. Black-knot on plum and cherry.

SOUTH DAKOTA.—(Brookings) Bulletin No. 30, March, 1892. Entomological notes.

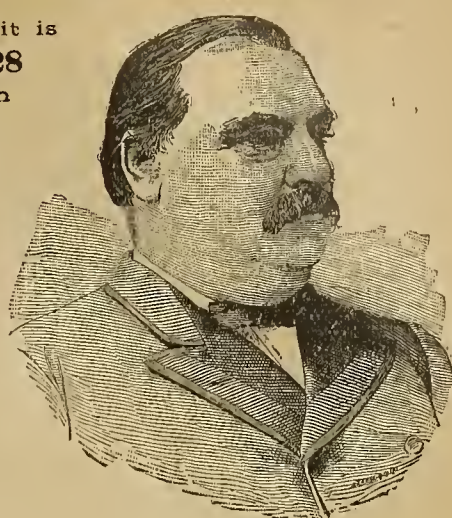
VERMONT.—(Burlington) Bulletin No. 29, May, 1892. Analyses of fertilizers. Bulletin No. 30. Results of the bounty on maple sugar.

WYOMING.—(Laramie) Bulletin No. 7, July, 1892. Insecticides.

UNITED STATES DEPARTMENT OF AGRICULTURE (Washington, D. C.) Office of Experiment Stations—Experiment Station Record, Volume III, No. 10, May, 1892. The fermentation of milk. Six lectures on the investigations at Rothamsted experiment station by Robert Warrington, F. R. S., delivered before the Association of American Agricultural Colleges and Experiment Stations. Division of Entomology—Insect Life, Volume X, Nos. 9 and 10. Division of Statistics—Report on the acreage of wheat and cotton and condition of cereal crops, and on freight rates of transportation companies, June, 1892. Division of Chemistry—Food and food adulterants, Part VII. Division of Forestry—Annual report for 1891.



Premium No. 115.



Premium No. 116.

Magnificent Lithographic Portraits of Pres. Benj. Harrison and Ex-Pres. Grover Cleveland.

Republican and Democratic Presidential Candidates.

These portraits are large and handsome, 22 inches by 28 inches in size and perfect likenesses, worthy of a place in any American home. A world-wide interest is centered upon these two eminent American citizens who represent the two great political parties of the day, and we offer you an unequalled opportunity for securing an authentic

PORTRAIT OF YOUR FAVORITE, FREE.

Upon receipt of 50 cents for one year's subscription to either Farm and Fireside or Ladies Home Companion, and 5 cents extra for postage and packing, we will mail free one of these handsome portraits to any address.

Or, one will be mailed free to any person sending only one new subscriber to either paper. See "Who is a New Subscriber" at bottom of this page.

Give the premium number of your choice.

We will make specially low prices to political clubs or parties ordering in quantities for campaign purposes.

Address **FARM AND FIRESIDE**, Philadelphia, Pa., or Springfield, Ohio.

MIDSUMMER READING.

GRANDEST BARGAINS EVER OFFERED

10 NEW BOOKS By the Most Popular Writers of the Day GIVEN FREE!

To any person sending us only 5 new subscribers to this paper at 50 cents each.

READ OUR ADDITIONAL OFFERS BELOW.

The sale of many of these books has heretofore been confined to the stores, where they are sold in bound form for \$1.00 to \$1.25. They are printed in good, clear type and strongly bound in heavy paper covers. This is the greatest opportunity of a lifetime to secure such valuable books for almost nothing. See this list of writers:

Geo. Ebers, Bertha M. Clay, M. E. Braddon, Nathaniel Hawthorne, The Duchess, Chas. Kingsley, R. L. Stevenson, Stepniak.

MOST INTERESTING BOOKS EVER WRITTEN.

No. 841. Blind Love, by Wilkie Collins. Interesting, as is everything from the pen of this noted author. He needs no introduction to our readers.

No. 842. Lady Audley's Secret, by M. E. Braddon. One of the best books of this ever-pleasing author, who always writes to meet the popular taste.

No. 843. A Life's Romance, by The Duchess. A tale of unusual and thrilling interest throughout. To many readers the name of this author is a guarantee of a good story, and this is one of the best.

No. 844. Hypatia, or New Foes with an Old Face, by Charles Kingsley. To those who enjoy fiction of a more substantial and lasting character, but nevertheless of deep interest throughout, written with the purpose of giving the reader more than simply a few hours of rest and pleasure, this story will appeal strongly.

No. 845. The Duke's Secret, by Bertha M. Clay, a writer whose novels are always welcomed and who does not possess the ability to write anything uninteresting.

No. 846. The Scarlet Letter, by Nathaniel Hawthorne, is a book of absorbing interest, and will always be held in high esteem. A story wonderfully written and vastly more than an idle tale. It is worthy any commendation that can be given it. Until very recently it has been sold only in expensive binding.

No. 847. The Career of a Nihilist, by Stepniak. The subject of this story is found in the exciting and surprising scenes in the Russian provinces, where plots and counterplots are continually arousing the people and unsettling the government. Startling incidents hold the reader closely throughout the whole story and are a revelation to residents in this free land.

No. 848. Uarda, by George Ebers. The works of this writer need no words of commendation to lovers of good fiction. Uarda is a book of the kind that chains the attention of the reader until it is finished, and during its reading is always laid aside with regret.

No. 849. Master of Ballantrae, by R. L. Stevenson. This story was but lately finished in the Century magazine. It was one of the best and most successful stories that has appeared in recent publications. The author's fame is proof that it is worth a very careful reading.

No. 850. Tour of the World in Eighty days, by Jules Verne. No other author has ever told such fascinating stories in such a delightful way as Jules Verne. The books of this author will always retain an interest to the reader, and what years past seemed to be but his fanciful imaginations are becoming realities of to-day.

We will send to any address, postage prepaid, the choice of any

6 BOOKS Selected from this list and this paper 1 year for ONLY \$1

Or, any 3 of the books and this paper one year for only 75 cents.

Or, any 2 of the books and this paper one year for only 65 cents.

We offer the complete list, 10 books, for sale for only \$1.

To any one sending us one new subscriber to this paper at 50 cents, we will send free the choice of any two of the books. The new subscriber may accept any of the above offers. For example, the new subscriber may pay \$1 and receive any 6 of the books and this paper one year and we will mail any 2 of the books to you for securing the new subscriber. See "Who is a new subscriber?" below.

THIS OFFER IS GOOD FOR 30 DAYS. DO NOT DELAY.

Work for the complete list. A whole library. Think of it! Send only 5 subscribers to this paper, at 50 cents each, and you will receive the full list of 10 books *Free*. We prepay postage in every case.

Who is a NEW Subscriber? The above offers are made to increase our subscription list, therefore a change from one member of a family to another is not securing a new subscriber. A new subscriber must be a person who is not now on our subscription list, and one whom you have sought out and solicited to take the paper. Sending your own subscription, or the name of your wife, husband or any other member of your own family, is not sending a new subscriber in the sense we intend it, and will not entitle you to an additional premium. You may count your own name, or the renewal of any former subscriber, towards a premium when three or four names besides your own are sent, as this shows you have actually done some work, and been out among the people telling them of the merits of our paper.

Address **FARM AND FIRESIDE**, Philadelphia, Pa., or Springfield, Ohio.



NEW ENGLAND CONSERVATORY

Founded by **Dr. Eben Tourjee**, **OF MUSIC**, **CARL FAELTEN**, Director.
Music, Elocution, Fine Arts, Literature, Languages and Tuning. A safe and inviting home for lady pupils. Send for Illustrated Calendar.
FRANK W. HALE, Gen'l Manager, Boston, Mass.

Mention this paper when you write.

\$50 Down Buys a Farm—In Crop!

If you want an 80-acre farm in a good neighborhood; near railroads; good buildings and fences and now in crop, send to-day for my lists. 80, 160, 320-acres at prices from \$2.50 to \$20.00 per acre!

As my terms are ten years time and only

One-Tenth in Cash

any live farmer can make his crops "pay him out." This is better than raw land at any price. Pays an income from the beginning.

OTIS A. TURNER,

Room 5, New England Bldg, Kansas City, Mo.
Mention this paper when you write.

Buy WALL PAPER By Mail

AT WHOLESALE PRICES

Handsomeness New Designs, 3c a roll.
Beautiful Gilt Papers, 5c a roll.
Elegant Embossed Gilt Papers, 8c a roll.
4 to 9 inch Borders, Without Gilt, 1c a yard.
4 to 18 inch Borders, With Gilt, 2c and 3c a yard.
Send 8c to pay postage on over 100 samples.
Address **F. H. CADY**, 305 High St., Providence, R. I.
Mention this paper.

SHORT HOME-FREE. Only one student in each town given this privilege.
WRITE NEW RAPID College of SHORTHAND
BUFFALO, N. Y. Send stamp for full particulars.

PATENTS

LEHMANN, PATTON & NESBIT,
Washington, D. C. Examina-
tions Free. Send for circular.

FARMERS' WIVES.

How to make money on top of your cook stove.
Write **AMERICAN MFG. CO.**, Waynesboro, Pa.

ENGINES

If you want to buy a strictly first-class outfit at low figures, address
The W. C. LEFFEL CO.
Greenmount at SPRINGFIELD, O.

FARMER'S

20 inch **BURR** STONE Mill \$35.
16 inch Mill \$25.
Catalogue Free.
Established 1847.
LEONARD D. HARRISON, Box A., New Haven, Conn.

FRUIT EVAPORATOR

THE ZIMMERMAN
The Standard Machine
Different sizes and prices. Illustrated Catalogue free.
THE BLYMYER IRON WORKS CO., Cincinnati, O.

Davis STUMP Puller Lifts 20 to 50 Tons.
Worked by 2 men. 5 sizes.
Price, \$35 to \$70.
Circulars Free. Sent on Three Days Trial.
H. L. Bennett, Westerville, O.

MY WIFE SAYS SHE CANNOT SEE HOW YOU DO IT FOR THE MONEY.
\$12 Buys a \$65.00 Improved Oxford Sinter Sewing Machine, perfect working, reliable, finely finished, adapted to light and heavy work, with a complete set of the latest improved attachments FREE. Each machine is guaranteed for 5 years. Buy direct from our factory, and save dealers and agents profit. Send for FREE CATALOGUE. Mention paper.
OXFORD MFG. CO., Dept. 24, CHICAGO, ILL.



Buckeye Wrought Iron Punched Rail Fence.
Also manufacturers of Iron Cresting, Iron Turbine and Buckeye Wind Engines, Buckeye Force Pumps, Buckeye, Globe and Champion Lawn Mowers. Send for Illustrated Catalogue and Prices to
MAST, FOOS & CO. SPRINGFIELD, O.

BEFORE YOU BUY A NEW HARNESS

send a 2c. stamp with your address for 72-page Illustrated Catalogue of 65 different styles of hand-made PURE OAK LEATHER HARNESS. Single Sets, \$7 up; Double Sets, \$16 up. Every harness Warranted and Shipped subject to approval. It costs only a 2-cent stamp to know what we can do for you. TRY IT.
King & Co., Wholesale Mfrs., No. 5 Church St., Owego, N. Y.
Mention Farm and Fireside.

MEND YOUR OWN HARNESS

THOMSON'S
SLOTTED CLINCH RIVETS.
No tools required. Only a hammer needed to drive and clinch them easily and quickly; leaving the clinch absolutely smooth. Requiring no hole to be made in the leather nor burr for the Rivets. They are STRONG, TOUGH and DURABLE. Millions now in use. All lengths, uniform or assorted, put up in boxes. Ask your dealer for them, or send 40c. in stamps for a box of 100; assorted sizes.
MANUFACTURED BY
JUDSON L. THOMSON MFG. CO.,
Waltham, Mass.

Burlington Route Harvest Excursions

August 30th and Sept. 27th,
FROM
Chicago, Peoria and St. Louis

to the Cities and Farm Districts throughout the

WEST Southwest and Northwest

Round trip tickets will be sold by your local ticket agent on these dates at

HALF RATES!

See that they read over the Burlington Route from Chicago, Peoria or St. Louis. It is the direct line to the territory in question. Send for pamphlet with map and complete information to
P. S. EUSTIS, C. P. A.,
CHICAGO, ILL.

3,000 JOB LOT BICYCLES

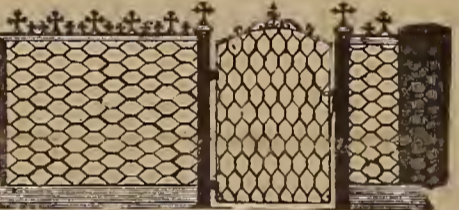
20 to 50¢ Off.
And lowest prices on all '92 makes & 2d h.d. Easy payments. We sell everywhere.
'91 Cushman \$55 Juno, balls \$65 40 in. \$37 Victor Jr., balls \$17
'90 Crescent ('91 make) \$50 '91 \$135 Rambler \$90
'91 \$145 Cushman High Grade \$90 And 20 other styles as cheap.
Largest stock and oldest dealers in U.S. Agts. wanted.
Cat. free. **Rouse, Hazard & Co.**, 32 E. St., Peoria, Ill.

SAY! BEE-KEEPER!

YOU AS—
Send for a free sample copy of **ROOT'S** handsomely illustrated Semi-Monthly (36-page) **CLEANINGS IN BEE-CULTURE**, (\$1.00 a year) and his 52-page illustrated **BEE-KEEPERS' SUPPLIES** FREE for your name and address on a postal. His **A B C OF BEE-CULTURE**, 400 double-column pages, price \$1.50, is just the book for YOU. Address
ROOT, THE BEE-MAN, Medina, O.

SEPARATOR and POWERS

for 1, 2, & 3 horses, with governor, either level or regular tread.
Get our prices and Catalogue of Sweep Powers, hand and power Corn Shellers, Feed Cutters, Feed Mills, Steel Land Rollers, Chilled Plows, Mowers, Wood Saws, Engines—3 to 15 Horse Power, mounted or on base plate.
S. S. MESSINGER & SON, TATAM, PA.



Best Fences and Gates for all purposes. Free catalogue giving particulars and prices. Write
THE SEDGWICK BROS. CO., RICHMOND, IND.
Mention Farm and Fireside.

Before you buy a Press, write the **HYDRAULIC PRESS MFG. CO.** of Mt. Gilead, O., for catalogue, which will be mailed free on application.

HYDRAULIC
Presses for all purposes; also general cider makers' supplies.

WELL DRILLING MACHINERY,
MANUFACTURED BY
WILLIAMS BROTHERS,
ITHACA, N. Y.,
Successors to the Empire Well Anger Co.,
Mounted and on Sills, for deep or shallow wells, with steam or horse power.

Send for Catalogue.
ADDRESS
Williams Brothers
ITHACA, N. Y.



CUTAWAY HARROW CO., SOLE MANUFACTURERS,
HIGANUM, CONN. New York Office, No. 18 Cliff St.
WHITMAN & BARNES MFG. CO. GEN'L AGENTS,
CINCINNATI AND CHICAGO.
Mention this paper when you write.

Milk PRESERVATIVE.

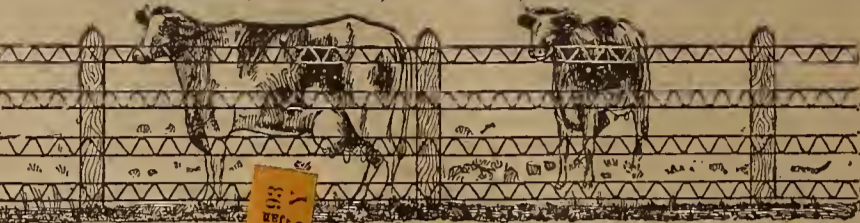
Milkmen, Creamerymen and Dairy-men can keep Milk and Cream fresh a week without using ice. Healthful, tasteless, odorless and inexpensive. SAMPLE, enough to make test, mailed for ten cents.
The Preservative Mfg Co., 10 Cedar St., New York.

THREE STYLES.
FIVE SIZES.
Thousands sold.



Mention this paper when you write.

CHEAPER THAN BARB WIRE.



HARTMAN WIRE PANEL FENCE.
Double the Strength of any other; will not stretch, sag, or get out of shape. Harmless to stock, enough to Ornament a Lawn. Write for prices, Descriptive Circular of Hartman Steel Picket Lawn Fence, Tree and Flower Guards, Flexible Wire Mats, &c.
HARTMAN MFG. CO., Beaver Falls, Pa.
Eastern Sales Agency, 102 Chamber St., New York; Southern Sales Agency, 51 and 53 S. Forsyth St., Atlanta, Ga.
Western Sales Agent, 505 State Street, Chicago, Ill.
Mention this paper when you write.

BUCKEYE Low Down SHOE GRAIN DRILL



BUCKEYE RIDING & WALKING CULTIVATORS, BUCKEYE SEEDERS, BUCKEYE CIDER MILLS and HAY RAKES. We also manufacture this same style in a Combined Grain and Fertilizer Drill.
BRANCH HOUSES: Philadelphia, Pa.; Peoria, Ill.; St. Paul, Minn.; Kansas City, Mo.; San Francisco, Cal. Send for Circular to either of these firms or to us.
When you write, be sure to say you saw this advertisement in Farm and Fireside.

TIME IS MONEY
WHICH YOU CAN SAVE BY USING THE
Queen Washing Machine
One washer sold at wholesale price where we have no agent. For full particulars and catalogue, address
The Buckeye Churn Co., P. O. Box 68, Sidney, Ohio.
Mention this paper when you write.



THE STANDARD OF THE WORLD
FOR HOME AND STABLE USE
HARNESS DRESSING
For Harness, Buggy Tops, Saddles, Fly Nets, Traveling Bags, Military Equipments, Etc.
Gives a beautiful finish which will not peel or crack off, smt or crack by handling. Not a varnish. Used by the U. S. Army and is the standard among manufacturers and owners of fine harness in every quarter of the globe.
SOLD BY ALL HARNESS MAKERS.
Mention this paper when you write.

THE GRANGER Evaporator

Fruit & Vegetable
For family use and small fruit growers. The Best and Cheapest in the market. Price \$3.50, \$6 and \$10. Circulars free.
EASTERN MFG. CO., 237 S. 5th St., Phila., Pa.
Mention this paper when you write.



IDEAL In Name and In Fact.
IDEAL Steel WIND MILL
and Three Post STEEL TOWER.
The LATEST and BEST.
Sizes 8-9-12 ft. Geared. 10 and 12 ft. Ungearred. TOWERS, 30, 40, 50 & 60 ft. Mills with or without graphite bearings.
STOVER MFG. CO., 507 River St., FREEPORT, ILL.
Mention this paper when you write.

FREE Stop right here! Read this add!
We will send it to you for nothing.
Do You Know a Good Thing When You See it?
The Finest Catalogue and Handbook of Musical Instruments ever issued. 28 pages, illustrated in colors with Portraits and Photo-Lithographs, giving full particulars of the celebrated Cornish
PIANOS AND ORGANS
You buy a Piano or Organ direct from our factory at cost price, thus saving from 50 to 100 per cent. DON'T buy elsewhere till you see our Catalogue. When you have examined it YOU WON'T BUY ELSEWHERE. BE WISE IN TIME. Don't fill agents' and dealers' pockets with your hard earned money; get every cent of value for yourself, and buy direct from the manufacturer. Send at once for our Catalogue; it is FREE TO ANY ADDRESS. Write us.
CORNISH & CO., (Old Established and Reliable) WASHINGTON, New Jersey.
Always mention this paper.

FREE For 30 Days. Wishing to introduce our CRAYON PORTRAITS and at the same time extend our business and make new customers, we have decided to make this Special Offer: Send us a Cabinet Picture, Photograph, Tintype, Ambrotype or Daguerotype of yourself or any member of your family, living or dead and we will make you a CRAYON PORTRAIT FREE OF CHARGE, provided you exhibit it to your friends as a sample of our work, and use your influence in securing us future orders. Place name and address on back of picture and it will be returned in perfect order. We make any change in picture you wish, not interfering with the likeness. Refer to any bank in Chicago. Address all mail to **THE CRESCENT CRAYON CO.** Opposite New German Theatre, CHICAGO, ILL. P.S.—We will forfeit \$100 to anyone sending us photo and not receiving crayon picture FREE as per this offer. This offer is bonafide.
When you write, mention this paper.

FREE during July and August.—Send us at once a photograph or a tintype of yourself, or any member of your family, living or dead, and we will make for you one of our finest \$25.00 life-size CRAYON PORTRAITS absolutely free of charge. This offer is made to introduce our artistic portraits in your vicinity. Put your name and address back of photo., and send same to Tanqueray Portrait Society, 741 DeKalb Ave., Brooklyn, N. Y. References: Rev. T. DeWitt Talmadge, all newspaper publishers, Banks, and Express Companies of New York and Brooklyn.
Mention this paper when you answer advertisements.



EASTERN EDITION.

VOL. XV. NO. 22.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, AUGUST 15, 1892.

TERMS {50 CENTS A YEAR.
24 NUMBERS.

The Circulation of FARM AND FIRESIDE
this issue is

250,600 COPIES.

The Average Circulation for the 24 issues of
the last 12 months has been

273,137 COPIES EACH ISSUE.

To accommodate advertisers, two editions
are printed. The Eastern edition being
100,200 copies, the Western edition
being 150,400 copies this issue.

Farm and Fireside has More Actual
Subscribers than any Agricultural
Journal in the World.

Current Comment.

A FARMERS' bulletin on the treatment of smuts in wheat and oats has recently been published by the department of agriculture, and can be obtained by applying to the secretary of agriculture, Washington, D. C.

The bulletin gives a brief illustrated description of the smuts affecting wheat and oats, estimates the damage annually done by them, placing it much higher than commonly supposed, and describes simple methods of preventive treatment. In conclusion, the bulletin says that it will fail of its object if it does not induce farmers to treat their wheat this year. The recommendations given are not from theoretical grounds alone, but are justified by the results of extended and laborious experiments many times repeated. One method of treatment is as follows:

The hot-water treatment for oat and wheat smut, discovered by J. L. Jensen, of Denmark, in 1887, consists in immersing the seed which is supposed to be infected with smut for a few minutes in scalding water. The temperature must be such as to kill the smut spores, and the immersion must not be prolonged so that the heat would injure the germinative power of the seed. If the water is at a temperature of 132½° F., the spores will be killed, and yet the immersion, if not continued beyond fifteen minutes, will not in the least injure the seed. The temperature must be allowed to vary but little from 132½°, in no case rising higher than 135° or falling below 130°. To insure these conditions when treating large quantities of seed, the following suggestions are offered:

Provide two large vessels—as two kettles over a fire, or boilers on a cook-stove—the first containing warm water (say 110° to 130°), the second containing scalding water (132½°).

The first is for the purpose of warming the seed preparatory to dipping it into the second. Unless this precaution is taken it will be difficult to keep the water in the second vessel at a proper temperature.

The seed which is to be treated must be placed, half a bushel or more at a time, in a closed vessel that will allow free entrance and exit of water on all sides. For this purpose, a bushel basket made of heavy wire could be used, with which spread wire netting, say 12 meshes to the inch, or an iron frame could be made at a trifling cost, over which the wire netting could be stretched. This would allow the water to pass freely and yet prevent the passage of the seed. A sack made of loosely-woven material (as gunny-sack) could perhaps be used instead of the wire basket. A perforated tin vessel is, in some respects, preferable to the foregoing.

Now dip the basket of seed in the first vessel; after a moment, lift it, and when the water has for the most part escaped, plunge it into the water again, repeating the operation several times. The object of the lifting and plunging, to which should be added also a rotary motion, is to bring every grain in contact with the hot water. Less than a minute is required for this preparatory treatment, after which plunge the basket of seed into the sec-

ond vessel. If the thermometer indicates that the temperature of the water is falling, pour in hot water until it is elevated to 132½°. If it should rise higher than 132½°, add small quantities of cold water. This will doubtless be the most simple method of keeping the proper temperature, and requires only the addition of two small vessels, one for cold and one for boiling water.

Steam, conducted into the second vessel by a pipe provided with a stop-cock, answers even better, both for heating the water and elevating the temperature from time to time.

The basket of seed should, very shortly after its immersion, be lifted and then plunged and agitated in the manner described above; and the operation should be repeated eight or ten times during the immersion, which should be continued fifteen minutes. In this way every portion of the seed will be subjected to the action of the scalding water. Immediately after its removal, dash cold water over it or plunge it into a vessel of cold water, and then spread it out to dry. Another portion can be treated similarly, and so on until all the seed has been disinfected. Before thoroughly dry the seed can be sown; but it may be thoroughly dried and stored if desired.

The important precautions to be taken are as follows: (1) *Maintain the proper temperature of the water (132½° F.), in no case allowing it to rise higher than 135° or to fall below 130°.* This will not be difficult to do if a *reliable thermometer* is used and hot or cold water be dipped into the vessel as the falling or rising temperature demands. Immersion fifteen minutes will not then injure the seed. (2) *See that the volume of scalding water is much greater (at least six or eight times) than that of the seed treated at any one time.* (3) *Never fill the basket or sack containing the seed entirely full, but always leave room for the grain to move about freely.* (4) *Leave the seed in the second vessel of water fifteen minutes.*

MR. TALCOTT's article on the cost of ensilage and the cost of producing milk, in which he stated that the yearly cost of keeping his cows is \$15 a head, has called forth some criticisms in three of our exchanges. The main point of these criticisms is that Mr. Talcott has charged his dairy business only with the actual cost of producing the feed consumed instead of what that feed would sell for at market prices. For example, he has charged clover hay to the dairy at \$4 a ton, the actual cost of producing it on the farm, instead of \$6, or whatever the market price might have been. In other words, the criticism is to the effect that the profits Mr. Talcott claims should not be credited to the dairy, but to the farm, and that to get at the real profits of his dairy business, it should be charged with the market price of farm products consumed.

In one sense this point may be well taken, but it should not be allowed to obscure the real object of the article. The method of book-keeping does not alter the cash receipts and the expenses of the business. If the grass, hay and corn produced on the farm bring in larger net profits when sold in the form of butter than in the form of feed, the successful farmer may be pardoned for the technical error in book-keeping that credits them all to the dairy business.

One critic finds fault with Mr. Talcott because he has not charged his dairy business with the value of the nitrogen, phosphoric acid and potash his crops of corn and clover removed from the soil storehouse. Why should he, when the butter sold from the farm carries away with it none of these valuable elements of fertility? Butter is composed of carbon, hydrogen and oxygen, and its original

source is air and water. That is one of the great advantages of the butter dairy business. It does not exhaust the fertility of the soil. The valuable elements that would leave the farm in the hay and grain sold, are returned to the soil. He also erroneously charges Mr. Talcott with estimating the value of twenty tons of clover hay at \$30—\$1.50 per ton. If he will read the plain statement carefully he will find that the cost of saving thirty tons of hay is given at \$30, and the rent of the land \$50, making the cost per ton \$4.

The interest on the value of the pasture land is covered by the charge of 25 cents a head per week, yet this critic adds \$378 to the cost for this item. By juggling with the figures in this way he expands the total cost of Mr. Talcott's dairy business from \$600 to \$1,500, and then unfairly places it in comparison with \$250, the cost of wintering. He started out by calling Mr. Talcott's statements "startling," and "at variance with the facts," and then proceeded to write a review of them that is remarkable for its erroneous statements and conclusions.

THE following table from the tenth annual report of the Ohio experiment station gives in a condensed form the yield of sixteen of the leading varieties of wheat for seven years; also the average yield of each for seven years:

VARIETIES.	Color of Grain.	Bearded or Smooth.	BUSHEL PER ACRE.							Average
			1884.	1886.	1887.	1888.	1889.	1890.	1891.	
Valley.....	red	bearded	38.1	45.8	34.9	33.6	44.5	36.1	39.5	38.9
Red Fultz.....	red	smooth	38.2	54.0	35.2	30.9	37.3	32.5	32.4	37.2
Diehl-Mediterranean.....	red	bearded	39.2	42.7	26.9	34.1	42.0	27.5	37.6	35.7
Royal Australian.....	white	smooth	40.2	49.6	38.8	18.1	45.6	32.6	24.5	35.6
Nigger.....	red	bearded	36.6	51.0	24.6	32.0	40.6	31.7	31.6	35.4
Egyptian.....	red	bearded	30.6	41.7	28.0	32.2	46.1	34.0	37.2	35.4
Poole.....	red	smooth	32.6	61.2	25.5	17.5	43.6	29.6	35.9	35.1
Penquite's Velvet.....	red	bearded	33.3	42.9	37.4	26.6	41.3	35.2	27.9	34.9
Silver Chaff Smooth.....	white	smooth	39.7	45.2	30.0	31.4	37.8	29.5	30.1	34.8
Tasmanian Red.....	red	bearded	49.6	45.6	22.1	25.0	37.1	29.3	33.1	34.5
Democrat.....	white	bearded	35.9	40.4	24.5	25.0	45.3	30.4	38.1	34.2
Martin's Amber.....	white	smooth	45.2	36.7	21.4	28.2	47.8	29.1	28.8	33.9
Theiss.....	red	bearded	29.4	46.2	29.5	36.8	37.8	25.4	30.5	33.7
Fultz.....	red	smooth	36.7	38.4	23.1	30.1	34.2	35.6	33.0
Landreth.....	white	smooth	31.6	39.9	32.0	25.6	41.1	25.3	32.6
Mediterranean.....	red	bearded	31.0	38.7	22.3	28.2	36.8	29.3	34.5	31.5
Mean.....			37.2	45.0	28.9	28.0	40.9	31.9	32.7	34.8

IN a recent number of the *Country Gentleman* W. W. Cooke gives the results of some tests made to determine the relative feeding value of sweet skim-milk and sour skim-milk for pigs. The feeding experiments commenced May 18, when the pigs were about six weeks old, and lasted until October 27. To one lot the milk was fed perfectly sweet. That fed to the other lot was allowed to stand in an open tub until it became thoroughly lobbared, or as sour as any skim-milk from separator creameries ever gets before it is fed out, when during the hottest days no attempt is made to keep it sweet. The pigs were fed what skim-milk they would eat, two ounces of corn-meal being added to each quart, until they were large enough to take six quarts of milk and twelve ounces of corn-meal daily. After that wheat bran and gluten meal made up what additional food they desired.

In the article, tables are given showing the daily rations, live weight at different periods, gain in weight, amount of food required to produce a pound of growth, etc., of each pig.

The tests show that the sour skim-milk produced the better results in every case. "It was evident," says Mr. Cooke, "within three weeks after the pigs were put on separate diets, that those having the sour milk were eating their food with better

relish, were looking sleeker and growing faster, although both lots ate up their food clean, so that they actually consumed the same amount of nutriment. It has been widely taught during the past year that the patrons of separator creameries were losing largely by allowing the skim-milk to sour before they got it to their pigs.

"The statement was made that in souring the milk sugar was changed to acid, and therefore a large amount of feeding matter lost. A rather extensive canvass among farmers recently showed quite a decided preponderance in favor of pigs doing better on sour milk than on sweet. How, then, can we explain and harmonize the two statements? The probable reason is found in the fact that when milk sours, the milk sugar is broken up into lactic acid, but this change takes place without any loss of solid matter. One particle of milk sugar merely absorbs some water, and splits up into two particles of lactic acid. Recent experiments seem to show conclusively that lactic acid, in common with several other vegetable acids, is digestive, and has a real feeding value. It could not be said from our experiments that skim-milk could be kept indefinitely and still not lose in feeding value, but it seems probable that there is no loss in feeding value in the first change of souring and lobbarding."

It is a matter of no little importance to the patrons of many separator creameries to know certainly that the feeding value of skim-milk is increased by souring. Used in connection with the proper grain rations, for feeding pigs sour skim-milk is worth at least twenty-five cents per hundred pounds of whole milk, when pigs are worth over four cents a pound, live weight.

To return the highest possible profits, the dairy business, like every other, should have no waste products. There are times when the by-products represent all the profits there are in a business, and they should never be allowed to go to waste. Many times the by-products, properly utilized, represent large profits on the business.

Prof. Cooke has done good service in demonstrating how the value of a by-product of the dairy business can be easily increased, and at the same time solving one of the problems that have been troubling creamery patrons.

IN a recent bulletin of the census bureau, the absolute wealth of the United States is estimated, according to the 1890 census, at \$63,648,000,000. This is over \$1,000 per capita, as against \$870 in 1880, \$780 in 1870, and \$514 in 1860.

FARM AND FIRESIDE.

ISSUED 1st AND 15th OF EACH MONTH BY
MAST, CROWELL & KIRKPATRICK.THIS PAPER HAS BEEN ENTERED AT THE POST-OFFICE
AS SECOND-CLASS MAIL MATTER.We have an office at 927 Chestnut Street, Phil-
adelphia, Pa., also at Springfield, Ohio. Send your
letters to the office nearest to you and address

FARM AND FIRESIDE.

Philadelphia, Pa., or Springfield, Ohio.

TERMS OF SUBSCRIPTION:

One Year, - (24 Numbers), - 50 Cents.
Six Months, - (12 Numbers), - 30 Cents.The above rates include the payment of postage by
us. Subscriptions can commence any time during the
year. Send for Premium List and see premi-
ums offered for obtaining new subscribers.**Payment**, when sent by mail, should be made in
Express or Postal Money Orders, Bank-checks or
Drafts. WHEN NEITHER OF THESE CAN BE PROCURED
send the money in a registered letter. All post-
masters are required to register letters whenever re-
quested to do so. Do not send checks on banks in
small towns.**Silver**, when sent through the mail, should be care-
fully wrapped in cloth or strong paper, so as not to
wear a hole through the envelope and get lost.
Postage stamps will be received in payment for sub-
scriptions in sums less than one dollar.**The date** on the "yellow label" shows the time to
which each subscriber has paid.**When money is received** the date will be changed,
which will answer for a receipt.**Discontinuances**. Remember that the publishers
must be notified by letter when a subscriber wishes
the paper stopped, and all arrearages must be paid.**When renewing your subscription**, do not fail to
say it is a renewal. If all of our subscribers
will do this, a great deal of trouble will be avoided.
Also, give your name and initials just as now on the
yellow address label; don't change it to some other mem-
ber of the family; if the paper is now coming in your
wife's name, sign her name, just as it is on label, to your
letter of renewal.

The Advertisers in this Paper.

We believe that all the advertisements in this paper
are from reliable firms or business men, and do not in-
tentionally or knowingly insert advertisements from
any but reliable parties; if subscribers find any of
them to be otherwise we should be glad to know it.
Always mention this paper when answering advertise-
ments, as advertisers often have different things ad-
vertised in several papers.

Our Farm.

REPORTS ON INSECTS—A COMMENTARY.

BY T. GREINER.

PROMPTNESS NEEDED.—In bul-
letin No. 19 (April, 1892), the
Massachusetts state ex-
periment station devotes much
space to the gipsy-moth. This
is indeed a formidable pest,
and leaves devastation in its
wake. Some of my readers
will say that it is a local visitation
and that they have not even yet seen
a specimen. This may all be true, and
yet, if the local authorities in the in-
fested territory had been less prompt
to act or had fought the enemy with
less heroic means, there can be no
doubt but all would have been given a
chance to make the gipsy-moth's ac-
quaintance. All that insect needs in
order to spread and become a scourge
everywhere and to destroy every vestige
of green foliage, is the slightest chance.

Fortunately the people in the districts
where the creature made its first ap-
pearance saw at once the absolute necessity
of prompt action, and without delay began
a "war to the knife." The infested dis-
tricts were put in quarantine and the in-
sects destroyed with Paris green, ker-
osene emulsion and all other means at
command. Perhaps the intruder may
now be regarded under control; still, the
danger is by no means entirely past.

This experience with the gipsy-moth,
however, involves an important lesson.
It shows us what can be done by prompt
and concerted action. It brings to light
the weakest point in our methods of fight-
ing our enemies. We are not prompt and
not thorough enough. We do not work
together as we ought. The potato-beetle
would never have become that terrible
pest that it now is if we had given it the
same reception on its first appearance that
was given to the gipsy-moth. We would
be able even now to exterminate it in a
few years, if all growers would work to-
gether, using promptly and persistently
the means so well known and easily ap-
plied for the insect's destruction. But
while even a single one out of ten persons
allows the beetle to breed at will on his
fields, what else could we expect but a
continuance of the nuisance? This is
also the case with the codling-moth
which makes our apples wormy, with
this difference only, that this pest (the
female not having perfect wing) does not
spread so readily from orchard to orchard,
so that the large orchardists, who, for-
tunately, are just the ones most likely to

spray their orchards, need not greatly
fear the moths which the small orchard of
a non-spraying neighbor may furnish.

All our injurious insects have their
parasites and insect enemies. The gipsy-
moth is no exception to the rule. Still,
the Massachusetts people did not rest easy
on that account and leave the task of
clearing out the gipsy-moth to their nat-
ural enemies, but took prompt action at
once. It will not do to put too much re-
liance on this assistance of insect par-
asites. We will always go safest if we
rely on our own efforts. Sometimes, it
is true, these parasites render material
aid, but if we do our part and make
proper use of insecticides, this help on the
part of friendly insects will make our
work all the more effective. The scarcity
of potato-beetles in this vicinity last
season seemed to give us the satisfactory
assurance that insect parasites were about
getting the upper hand of our old ten-
striped foe. We should then have
worked all the harder to make sure that
all were destroyed which managed to es-
cape their insect enemies, instead of
standing idly by and imagining our ser-
vices were not needed any more. Now
the beetles are present again in quite large
numbers, and we have to fight them as
before or suffer loss.

**FIGHTING OUR ENEMIES WITH CONTA-
GIOUS DISEASES.**—On the table before me
is also bulletin No. 17 of the Division of
Entomology, United States Department
of Agriculture. This treats on the chinch-
bug, an insect much dreaded in various
sections of the states on account of the
damage it does to grain and other crops.

Perhaps some of the readers will re-
member that Prof. Forbes recently dis-
covered a highly contagious chinch-bug
disease, and that efforts were made to
spread this deadly disease among the
vast hordes of healthy bugs and thus de-
stroy them. It is highly probable that
the infectious diseases of our enemies
will play a very important part in our fu-
ture warfare against bugs, and perhaps
against other foes. I see the report from
Germany, for instance, that the field-
mouse pest is losing its terrors there, be-
cause scientists have found in the mouse-
typhus a disease which can easily be
spread among the rodents and which is
sure to kill them. Surely it cannot be
said that we are not making progress in
our manners and means of protecting our
crops against enemies.

A TREATISE ON INSECTS.—An older bul-
letin of the Central experiment farm,
Ottawa, Canada (bulletin No. 11, May, 1891),
contains "Recommendations for the pre-
vention of damage by some common in-
sects of the farm, the orchard and the
garden." I do not see anything in it that
is particularly new, but it gives good de-
scriptions and illustrations of our chief
insect foes and the standard methods of
protecting our crops against them. Peo-
ple who have none of the standard works
on insects will find this little treatise
quite handy if they can get it at little
cost or free on application. I do not know
the conditions under which the Central
experiment farm sends out its bulletins
to applicants. The treatise in question
is by James Fletcher, entomologist and
botanist to the Dominion experimental
farms.

THE PEA-WEEVIL.—I have so many in-
quiries about the pea-weevil that I will
quote the following from the same bulle-
tin; namely, "Remedies for the Weevil."

"First, clean seed. Of great importance
is sowing uninfested seed. When weevily
peas are sown as seed, the beetles emerge
soon afterwards and remain in the fields,
feeding on the plants until the young
pods are formed. The use of weevily
peas for seed is a great mistake, the germ
of a large proportion being, as a rule, de-
stroyed, and those which do germinate
producing weak plants. Although ex-
treme cold (15° below zero, Fahr.) cer-
tainly killed the weevils in two samples
of peas, it would be a most unjustifiable
experiment to introduce infested seed
into a district, trusting to the climate to
destroy the weevils.

"Second, bisulphide of carbon. When
seed is known to be infested, there are
several ways of destroying the insects.
The remedy most widely used by seeds-
men who have all the conveniences, is to
place the seed in some close vessel and
subject it to the vapor of bisulphide of
carbon. This chemical vaporizes when

exposed to the air, and the vapor is so
much heavier than air that it will run
down through the mass of any seed upon
the top of which it has been placed, and
will destroy all insects. The quantity re-
quired is small, one quarter of a pound
being enough to disinfect three hundred
weight of peas. Place the grain in a per-
fectly tight bin or barrel and then pour
some of the bisulphide into a shallow vessel
and place it on the top, put on the cover
and keep it tightly closed for forty-eight
hours. The bisulphide does not injure
the seed in any way, but it must be used
with care on account of its extreme in-
flammability. The seed must be emptied
out out of doors, and no light must be
brought near it or an explosion will oc-
cur.

"Third, warm storage. If seed peas are
stored in a warm room in bags of canvas
or strong paper during the winter, the
weevils will emerge and die before the
seed is required for sowing.

"Fourth, holding over seed. Peas can be
held over until the second year after har-
vesting without injury, and the defective
seed can be sorted out before sowing.

"Fifth, soaking. If seed be found to con-
tain weevils at the time of sowing, and it
is inconvenient to hold it over, the wee-
vils can be drowned by placing the seed in
soak for twelve hours before sowing. It
must, however, be sown or dried at once
when taken out of the water."

I am somewhat inclined to take excep-
tions to points three and four. These
methods do not seem to be certain enough.
I have kept seed peas in manila-paper
sacks in the house from the time the peas
were harvested until spring, and when
the sacks were opened at sowing-time
they were alive with weevils. These, if
allowed to escape, will surely be ready for
mischief again. Bean-weevils are known
to subsist for a long time, perhaps until
the second season, on the dry substance
of the seed beans. While I do not know
how long pea-weevils can live after they
have emerged from the peas, I think it
much the safer plan to kill them while
yet inside the peas and before they have
done too much mischief, by exposing the
seed to the bisulphide fumes, or by mix-
ing a little buhach with the seed peas or
beans. This season I watched my peas
while in bloom and sprayed them, when
the presence of weevils was discovered,
with water to which a little buhach (a
tablespoonful made into a paste with
water, to about five gallons of water) had
been added. It cleared the vines for the
time being, and the peas, both as gath-
ered for the table and for seed, seemed to
be less effected than they ordinarily are.

CO-OPERATIVE DAIRY BUSINESS.

By request I offer a few suggestions re-
lative to the necessary requirements of co-
operative creameries and cheese factories.
My experience of thirty years' continuous
work with them as salesman, book-
keeper, director and patron has given me
an opportunity to point out some mis-
takes very liable to occur among the best
informed farmers who have made grain
or stock farming a specialty, but for some
reasons desire to change to the dairy.

Ashtabula county has been the banner
dairy county of Ohio for several gener-
ations of time, and forty years ago when
I first came here to live, there was but lit-
tle or no attention paid to other farming.
The farmers did not try to even raise
wheat enough for their own bread, or corn
enough to feed their stock, but would de-
pend upon the sale of the dairy products
to purchase needed supplies. This terri-
ble mistake of specialty farming told
very severely upon the welfare and pros-
perity of our people.

About fifteen years ago we organized
the first Farmers' Institute ever known to
our American people, or the world, and
have held our sixteenth annual session.
It was done to teach our people mixed
farming. We commenced to grow grain,
sheep and wool and do variety farming,
and soon learned that by so doing our
farms could develop greater possibilities,
and it is my desire to say that any county
of Ohio that confines its farming to grain-
growing alone is making a sad mistake
and neglects important help. A good
little dairy of cows is necessary on every
farm of any considerable size; not an en-
tire venture of the whole farm. Cows will
eat varieties of grasses and feed from the
farms that sheep or horses will not touch,

and if all are kept upon the same farm,
every particle of grass, hay, corn, oats or
crops of this nature of the farm can be
fed upon the farm, and the sole products
of the farm carried to the highest point of
production. You can sell butter, cheese,
milk, cattle, horses, hogs, in fact, the en-
tire crop is carried to the end of capacity
on the farm, and by this means the fertil-
ity of our soil is increased, while greater
revenues will certainly follow with mixed
farming.

Every county should hail with joy and
encouragement the creameries and fac-
tories, and every farm should keep the
proper number of cows to balance well the
necessary stock and output of the farm.
I find that from ten to twenty head of cat-
tle are actually needed on every farm of
one hundred acres, to eat up the coarse
fodder, such as corn stalks, clover hay,
and work the straw of grain farms all up
into good manure. The quantity of grain
will be made to increase with fewer acres
and more manure and less plowing with
better tillage; it also reduces cost of pro-
duction and is the correct road to follow
for the hidden pot of gold. Farmers will
do themselves good to unite in the co-
operative dairy business. It should not
be done with indecent haste, nor should
they rush into it pell-mell and sacrifice
other valuable interests already skilfully
performed upon the farm, but they can
add a few cows—good cows that will give
milk enough of fine quality to pay a hand-
some profit above cost of care and keep.
No man should think of keeping a cow
more than one season that will not do it,
and he should know for certain by test-
ing them frequently. It is a great loss to
the farm to struggle on with a dairy of
cows when a large portion of them may
lose you money every day.

Co-operative butter-making or cheese-
making can be no longer fairly done be-
tween mau and man upon any other
basis than the true test of milk. The
quality of it must govern the price or
division of the product. If all farmers
would be careful and painstaking with
their milk, cooling it and furnishing the
necessary deep ice-water setting to secure
the cream, and then learn to make good
butter at home, or if they would engage
in the business extensively, enough to
keep twenty good dairy cows, or more,
best adapted to cheese-making, they
could make money by manufacturing full
cream-cheese at home. But they will not.
There is no such thing as getting over one
man in ten of all our farmers to do what
is best for himself, with the dairy on the
farm. Therefore, good butter factories
and good cheese factories are a necessity
and godsend to the country, and will pay,
when properly managed, a good, hand-
some return to the farmer.

The hauling of milk to a separator
creamery or to a cheese factory is a very
important item to be looked after, and as
the factories will now receive it in no
other way except upon true test, it is safe
to deliver milk but once a day. The
night's milk can be left at home, and
should be well cared for. Keep it in open
air, but under cover of roof, and cooled
down in hot weather to as near sixty
degrees as possible, and then add the
morning mess of warm milk and go
as early as possible to the factory with
it. We find that milk-haulers can best
be procured by calling a meeting of the
patrons of the factory and letting the
milk routes to the lowest bidder. A
team can haul the milk with safety five
miles, and a few longer routes can be tol-
erated, but it should be the aim of all
creameries to have some short routes so the
work of separation may begin early in the
day and the teamsters started back home
as early as possible with the load of skim-
milk that the creameries return to the
farmers—usually eighty-five pounds of
skim-milk to one hundred pounds of pure
milk delivered there.

It is a very difficult matter for each
farmer to deliver his own milk to the fac-
tory. For about five cents per hundred
pounds a teamster can be hired to haul
for twenty farms or more. The man
who lives close to the factory must pay a
uniform price with the one five miles
away, for the reason that in order to make
the factory a success for any of them, you
need the milk from all farms for five or six
miles around it, and the location should
make no special advantage for any single
individual. My farm is not over fifty

rods from our factory, but I always pay the teamster just as much as the patron does who lives five or six miles away, because my success depends upon having his support to the enterprise. It is unnecessary for me to say a word about the skill or management of the creamery, because men of that trade will be hired to do the work, but the farmer who furnishes the milk will soon grow tired of the business unless he can make money. To make money he must have good cows, and then he must adopt the silo and ensilage I have heretofore written so much about.

Where the roads are passable in winter-time, he should then so manage as to have his cows come in fresh milk in September, October and November, if possible, for more pounds of milk will be produced annually from a cow if she comes in milk in the fall of the year, and it will bring much higher prices in winter than summer, and with the aid of the silo costs but a trifle more, and it is much easier to attend to it than in the summer-time when crop farming is on our hands.

Milk sent to creameries or factories is by far the easiest way a farmer can handle it, and costs him the least effort and expense. If he has sickness in his family or is short of good help, the creamery and factory will make him good returns and he has more leisure and less care than if he is compelled to do methodical and steady work without any variation. The dairy business teaches close application, is good discipline for the farmer, and when he does it right he can make money.

H. TALCOTT.

STRAWBERRY EXPERIENCE.

The very wet season we have had has been very favorable for all kinds of newly-set small fruits. Between May 15th and June 1st I set 9,600 strawberry-plants, and there is not more than twenty missing in the whole plantation. Out of 4,500 red and black raspberries planted with my own plants, not more than fifty have failed; but of 450 purchased of a stranger, fully one half did not grow. They were the smallest plants I ever saw, and such as I should never think of setting or selling under ordinary circumstances; but the ground was reserved, and when they came quite late in the season I planted them. Whether the man was ignorant of what a good raspberry-plant should be, or dishonest and gave me his culls, I cannot determine, but from some other things in connection with him I am inclined to believe the latter supposition to be the correct one.

I furnished a friend with 350 plants about the middle of May, and in six weeks from that time he picked twenty quarts of very nice berries therefrom. I told him to remove the blossoms, but he failed to do so, and his plants are growing vigorously and making runners just as if they had not been subjected to the strain of fruit bearing. In previous years I have noticed that plants set very early in the spring will bear fruit without any apparent injury, and were I compelled to choose between planting in August or September, or next spring, for fruiting next June, I would wait until spring, and plant just as soon as the frost was out of the ground. Strong, well-rooted plants can be purchased in the spring for about half what much poorer plants can be obtained for in August, and there is no risk whatever in very early spring planting, either from drought or winter-killing. I think more fruit can be obtained from spring-set plants than from those set in autumn, as the crowns grow uninterruptedly, and the check from moving is less. There is a great difference in varieties, however, and those most vigorous will do the best, and if a little adhering soil can be retained, the plants do better. For this reason it is better to get the plants near home, and if grown in clayey or tenacious soil, all the better.

I have been very successful at times in transplanting strawberries at seasons most unfavorable. I will give one instance. On the 9th day of June of the present year I was visiting the strawberry plantation of my friend, Grant Kearns, near Zanesville. He is the originator of the new strawberry, Muskingum, and I was so well pleased with the luxuriant growth of the plants on his and adjoining plantations, as well as the size, quality and yield of the fruit, that I could not wait another year to have some, and

ordered fifty plants dug at once, although they were loaded with magnificent berries. They were dug from the edge of the narrow, matted rows, and considerable of the clay loam adhered to the roots. They were carried in a market-basket, having been well packed in sphagnum, and planted on the 11th. I was obliged to dig up some Chas. Downing, planted three weeks before, to get a place to plant them, and at this writing, three weeks later, it is impossible to distinguish them from the rest of the plantation except by the stakes. At the Ohio horticultural meeting, held at Zanesville on the 9th of June, the Muskingum was the handsomest berry, with one exception, of thirty very fine varieties shown.

This exception was the Middlefield, originated by the late P. M. Auger, of Connecticut, and shown by Mr. John Beaver, of Dayton, Ohio. Mr. Beaver is acknowledged to be the best grower of amateur strawberries in Ohio. It may be that this berry, grown by the acre as they grow the Muskingum around Zanesville, might not lead or even equal that variety.

The wet weather, although favorable to transplanting, has been quite unfavorable to the production of a high grade of berries, many being small and imperfect. During the last few days of planting, strawberries were in full bloom, and working right among them, digging and trimming plants, I observed the almost total absence of bees and insects, there being but one day in ten when their hum could be noticed. It was showery, with very high winds, and what pollination was done must have been largely the result of the wind. I have fruited over twenty varieties of strawberries this year, but only one or two are very new.

Bubach and Warfield easily led as market varieties, the former for its size and productiveness, and the latter for its beauty, solidity and quality. The latter ripens among the earliest, and is the favorite table berry with my family and visitors. For an early market berry there is no variety that is more profitable than the Crescent, and for very late the Chas. Downing and Kentucky easily discount any varieties I have tried.

Haverland was very unsatisfactory this wet season, and it is so poor in quality that its sale should be prohibited. It is so liable to rot on the stems before ripening that I doubt the profitability of growing it, taking the seasons as they run.

Cloud produces a great crop of medium-sized fruit of poor quality, and the only excuse I can find for growing it in the future is that I do not like to have all my eggs in one basket, some varieties doing better some years than others.

Although an old variety, I fruited for the first time Minor's Prolific, having bought it of a neighbor for Ontario. It did so well that I shall plant it to some extent next year as a pollenizer, in place of Chas. Downing. This berry has been in the Akron market for some years, but for some reason I never got any plants, although it did well for others. For various reasons I have got enough of Sadie, Logan, Gold, Viola Burt and Leviathan.

Cumberland I shall replace with Muskingum as fast as I can multiply the variety. In form the Muskingum resembles the Cumberland, but is much darker outside and red-fleshed. Since commencing this article I have been to the strawberry patch, and find that Muskingum plants put out less than three weeks ago are making runners freely.

To add to the miseries of a wet season and a market previously cloyed with southern Ohio berries, I had a totally incompetent foreman in charge of my pickers. Although I paid him high wages, most any bright, fourteen-year-old boy, used to berry-picking, would have done better work than I got. Generally a foreman takes some interest in advancing his employer's interests, at least puts in all the time he is paid for; but my man this year was not built that way. It seemed to be his study to do as little as possible, and he seemed to entirely forget for the most part that he was there in my place. All large berry growers complain more or less of the difficulty of getting competent foremen, and happy is the man who has in his family a competent salesman, so that he can superintend the picking himself. I

shall hereafter endeavor to have each row distinct and practice mulching, as this simplifies the labor of picking very much. It is easy to see whether the picking is done thoroughly. The pickers can get upon one knee, and go back and forth without crushing the fruit. To-day, June 30th, we are plowing up one patch of strawberries, to plant with Ford's Early sweet corn, and day after to-morrow another one goes under, to be planted to Stowell's Evergreen. Both of these plantations have borne two crops, the second crop being this year nearly as profitable as the first crop on an equal area of new plantation. The corn crop will subdue the sod, and next year the ground will be in fine condition to plant with raspberries.

Next week haying will commence, and we shall get the spring rake down from the scaffold in the barn, and put it together, and the first use made of it will be to rake together the mulch on the strawberry ground preparatory to working the soil and starting the plants for another season's work.

I shall not top-dress with anything, as a friend has had a rather unpleasant experience in that line. He top-dressed with a compost of night-soil and other materials (all, however, thoroughly rotted) last July, and worked the compost into the soil between the rows by repeated cultivation; yet his berries were boycotted by the people of his village, and he had to find a market elsewhere.

As a general thing, I believe in surface application of manure; but very good results can be obtained in strawberry culture by plowing under a heavy coat of manure before planting.

L. B. PIERCE.

Summit county, Ohio.

ENSILAGE.

Mr. Talcott had a very readable and very taking article on ensilage in FARM AND FIRESIDE of July 1, but I am afraid his enthusiasm has led him a little too far silo-wards. There is no doubt that good ensilage makes good feed for dairy cows; there is doubt that it makes such good and cheap feed as Mr. Talcott would have us believe. I don't wish to discourage any one from building a silo, but I do wish to have all the facts laid before him before he makes up his mind. I was at one time just as enthusiastic about ensilage as Mr. Talcott now is, but I look upon it now in a different light. Mr. Talcott believes ensilage to be a good milk-producer. At the Wisconsin station an experiment was made to show the difference in value between ensilage and dry fodder for the production of milk. Twenty cows were fed for 56 days with all the ensilage they would eat; they gave 19,813.4 pounds of milk. The same cows were then fed for 56 days all the dry corn fodder they would eat, and they produced 19,801.2 pounds of milk. Here was only a difference of 12.2 pounds of milk in favor of ensilage. The cows were fed the same amount of hay and grain in each case. This was hardly a fair experiment because cows naturally shrink in their yield when changed abruptly from succulent to dry feed, and, moreover, the cows were 56 days longer in milk when fed dry fodder than when fed ensilage; nearly two months longer in lactation counts more or less.

This is only one experiment, and you may say it is not conclusive; granted, but it must have a certain weight as evidence. Prof. Henry, of the Wisconsin station, says an ear of corn in the silo is not worth as much as one outside; Mr. Talcott speaks of his "good, warm, soft, well-cooked ensilage corn, cob and all," as if it were worth more than the cold, hard, dry, cured corn outside. I used to pick up the slices of ears out of the silo with just the same interest and belief in its exceptional virtue as Mr. Talcott now does.

CAN WE MAKE MONEY WITH ALL DRY FEED?

Mr. Talcott says: "There is no earthly use to try to produce milk on the farm with high-priced ground feed of any kind—bran, shorts, oil-meal or cotton-seed meal." I have a neighbor who has paid for one farm and is now paying for another by selling milk made by feeding purchased, dry ground food. My cows have made 300 pounds of butter a year on all dry feed, most of the grain feed purchased, and they paid a profit over cost of feed of \$54 per head. Taking the average of Mr. Talcott's own figures (17 pounds of

milk to a pound of butter, and 3,500 pounds of milk per cow a year), his cows make only 206 pounds of butter per head. Here is a difference of 94 pounds of butter per cow in favor of dry feed, and yet Mr. Talcott says "there is no earthly use to try to produce milk on the farm with high-priced ground food of any kind." My 94 pounds of butter was worth to me \$31.02; my butter cost for feed, 15 cents per pound, and sold for 33 cents. The feed was "high-priced." If I could reduce the cost of production to 10 cents a pound—Mr. Talcott says the best butter made in the world need not cost 10 cents per pound—I would be glad to do so, but don't see how reducing the average yield of my cows 94 pounds is going to help me.

THINK IT OVER BEFORE YOU DECIDE.

I don't write from any spirit of controversy; all I wish is to get the whole truth. The silo has not yet been proved to have added anything to the food value of what has been put in it; a silo and its attendant machinery, and extra labor, is quite a costly affair to most farmers; it is not everyone who can afford the expense unless he is sure it is the best investment he can make. There is certainly some risk involved, so we should think the matter over before we decide, and in thinking about the subject let us first see whether we have been getting all out of the dry corn crop there is in it, whether we have not been wasteful in our manner of handling and feeding the dry fodder. Let us look back and see if we have given clover hay a fair show; have we cut it up at the right time and cured it properly? Have we fed enough grain? Have we fed our cows in warm stables, and fed good cows? Have we done everything in the best manner? If not, and we want to try ensilage because that will make dairying pay, then we will fail with ensilage. It will pay to dairy without the silo. To those who now make the dairy pay, the silo may help them to a greater profit; but if it does, it will not be because ensilage has a greater feeding value than dry corn and corn fodder. I have made no extravagant statements, and now, before you decide for or against the silo, think over the subject carefully.

A. L. CROSBY.

KEEPING AND FEEDING ENSILAGE.

Mr. E. L. Ansley, of Texas, writes for answer through FARM AND FIRESIDE, to know whether ensilage can be safely kept in the South, and also whether it can be fed to mules.

The wooden silos that I have so fully described will keep ensilage, if fully matured corn is used, in any and every state in this Union, and will keep in good condition from season to season. When it is not being fed for a time, as might be the case in spring or early summer when pasture grasses are so abundant, a moldy crust forms on the top of the ensilage in the silo, which all farmers will carefully remove and throw away out in the barnyard and then hogs, cows, steers, mules, sheep and most all kinds of stock will eat it all up, if they can get to it; but it looks too bad for a man to feed that moldy crust of ensilage to his stock, and he won't do it. Generally, this crust will not be over three to six inches thick, which is all the waste in keeping it over after you have stopped feeding at the first opening of a pit. Stock of all kinds will eat warm ensilage greedily, and they don't have to be taught to do so. Mules and horses all like it, but care must be used in feeding it to them not to feed so much as to give them scours. It is very loosening feed. I give my horses a half bushel of it night and morning, and then dry hay or straw. In winter-time it is excellent feed and keeps their systems in perfect condition, and horse-jockeys know the value of it up here to hide heaves in horses.

H. TALCOTT.



Emma Frederick.

Our Baby

Was a beauty, fair, plump and healthy. But when two years old **Scrofula Humor** spread over her head, neck and forehead down into her eyes, one great sore, **itching and**

burning. Hood's Sarsaparilla gave her new life and appetite. Then the humor subsided, the **itching and burning ceased**, and the sores entirely healed up. She is now perfectly well." I. W. FREDERICK, Danforth street, near Crescent ave., Cypress Hill, Brooklyn, N. Y.

HOOD'S PILLS cure all Liver Ills, biliousness, nausea, sick headache, indigestion.

Our Farm.

HOME GARDEN TEACHINGS.

BY JOSEPH.

CARPETING THE GARDEN.—I am one of those who honestly and sincerely believe that the home garden should be an ornament—really, one of the greatest ornaments—of the place. I can see as much beauty in straight rows of thrifty carrots and beets and celery and onions and other stuff, all without a weed and with freshly-stirred soil between the rows, as I can find in the best kept flower border, and more than in a carpet bed of fanciful designs. I always take pride and pleasure in showing my garden to visiting friends. If I can add to the attractiveness of the patch in any way, I do not hesitate to take a little extra pains to do so. This season I had a lot of littery manure, consisting mostly of coarse hay. I have used this for carpeting the garden and early potato patch. The litter was spread freely all between the rows, so that the ground was and still is entirely covered. Rains have soaked out the manurial matter, which has probably helped the potatoes along; thus, the material presents a clean carpet. There has not a weed been seen since the litter was applied in the fore part of the season. No hoe has been used, and the vines grow in the greatest thrift. An examination of the ground under this carpet showed it to be quite moist even in the driest weather we had. I am confident the labor of putting down this litter has been well repaid in many respects. The practice has suited me so well that I am extending it to other vegetables, especially to celery, where that is planted on the old plan.

Where celery is grown on the new plan, with plants standing seven or eight inches each way, or in rows nine to twelve inches apart and plants five or six inches apart in the row, coarse litter cannot well be used except with great care in putting it down after the plants have reached some size. For carpeting my patch I have used a fine, old manure from a spent mushroom bed. This was carted into the patch per wheelbarrow, after the plants had made some growth, and then spread several inches deep between the rows. It has seemed to be of great service in keeping the ground moist and cool, and of encouraging plant growth.

Perhaps we have not generally appreciated the value of mulch in the garden as we should. I shall use it much more freely hereafter. Often we meet much difficulty in setting celery-plants in the hot, dry days of July. The ground may be almost dust dry and the scorching sun will soon burn up the newly-set plants. I manage as follows: The plants are trimmed in the usual way by cutting off the tips of long roots and twisting off about one third of the top, or even one half and more if the top growth is excessively heavy. Then the plants are set in the well-prepared ground and watered as abundantly as practicable. This work is done in the afternoon or evening, preferably on days when the official weather reports indicate cloudy weather for the next day. But as soon as the sun comes out bright again—may this be the next day or day after—I scatter a thin covering of fine hay all over the bed, and leave it on until the plants have taken root again, or until a rain sets in. A daily evening paper I find to be a great help in my gardening operations, as the weather reports in it give me an idea of what kind of weather we may expect for a day or two. If rain or cloudy weather is announced for the next day, I can often save carrying a lot of water to the garden in the afternoon and evening; that is, if the plants are not already suffering too badly. In that case I will water them anyway, in order to be on the safe side should the prophesied rain fail to come.

KILLING LARGE WEEDS.—Mr. Henry Jentsch, in a letter to the FARM AND FIRESIDE, recommends the following method of killing burdock, thistles, etc.: Cut the weed with a knife or hoe close to the ground; then put a teaspoonful of kerosene upon the root, and that will be the end of it. This method is all right, if we wish to rid our premises finally of a few scattering plants of large perennials. It is sure enough. In place of kerosene-oil, we might use sulphuric acid, dropped

from a small bottle with a quill through the cork. But where these large weeds are more abundant, persistent hoeing out will also kill them in short order. Allow no top growth for one season, and the object will be accomplished.

SMOKE VERSUS FROST.—We sometimes hear of smoke being used with some effect in preventing damage by late spring or early fall frosts. In my experience, a little covering by paper, hay, straw or earth, etc., is worth ten times as much as the biggest smudge you can produce. In short, I do not bother with starting fires as a means of protecting garden stuff against frosts. The following letter on this subject is received from J. F. Thissell, Tennessee:

"Prof. S. T. Maynard, of the Massachusetts experiment station, states that the use of fires and smudge, often recommended to prevent frost damage, gave no beneficial effect at that station. Large and small fires of shavings, waste material and gas-tar were tried, but the smoke would never hover over the ground. When the weather was clear and cold enough for frosts, the smoke would rise straight up. Will not too much heat in the fire compel the smoke to ascend, when there is no wind? In Michigan, I have tried this plan, using rotten wood of that peculiar character that will not blaze. This gives a dense smoke, with but very little heat, and the smoke often so covers the ground, sometimes at an altitude of a few feet, that it resembles a very thick, large cloud. There is almost always a slight drifting of the smoke in some particular direction, and once, when I did not first ascertain 'which way the wind was,' I covered my neighbor's field with the cloud. I prefer the bit of green grass, a leaf or a bit of hay laid over the plants."

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Japan Chestnut.—N. A. T., Gap Creek, Tenn. (1) They have not been very successful in Tennessee, but have not been generally or persistently tried. The climate is warm enough, but they do not seem to be adapted to the burning suns and dry weather of your section. (2) The nuts should be wintered under a light covering of leaves, where they will get some frost, and should be planted in the spring.

Leaf-curl.—I. J. C., Marion, Ind. Your peach leaves are affected with what is commonly called peach "leaf-curl." It is a fungus disease that is very common on peach-trees during warm, moist seasons. As soon as dry, warm weather comes its growth ceases. There is no known remedy, and the disease is seldom very injurious. If the injured parts were cut off and burned at once when first seen, the infection might not spread so rapidly.

Worms on Berry-bushes.—Subscriber, Highland Station, Mich. The bushes should be sprayed with Paris green or London purple and water, in proportion of one pound of the poison to 150 gallons of water. This is a sure remedy for insects that eat foliage. I am not sure which you mean of the several caterpillars that eat raspberry leaves, and it is possible that white hellebore and water, at the rate of one teaspoonful of white hellebore to the bucketful of water, will be as sure as the arsenic poisons, and safer.

Strawberries Not Fruiting.—J. J., Sloan, Iowa. The best thing for you to do if your strawberry bed does not fruit well and has been out two years, is to plow it under and buy strawberry-plants of some good kinds, and set a new bed in another place, in August, if you want fruit for your family for next year. If you raise them for market, it will probably not pay you to set the plants until next spring. The varieties doing best generally through Iowa are Warfield and Haverland pollinized with Michel's Early.

Curculio on Plums.—P. A., Greenville, Pa. Nothing can be done to save plums that have been injured by the plum-curculio. The remedies must be confined to catching or poisoning the beetles while they are feeding and laying their eggs early in the season. It is now too late to do anything this year of any practical value, though of course if all the fallen fruit was fed to hogs or otherwise destroyed, the larva in the fruit would be destroyed, but as your neighbors will probably raise a crop of curculio large enough for the whole neighborhood, this practice will avail you but little.

Peach-tree Borer.—A subscriber writes us from Texas of the great damage done to peach-trees there by the peach-tree borer, and says that few peach growers there are aware of their loss from this source. In a subsequent issue of FARM AND FIRESIDE I will describe and illustrate this insect and its work, but at this time it is most important that our subscribers should be reminded that this

borer needs attention now and until the late autumn. The trees should be examined now and once every month until cold weather, and if there is any exudation of gum near the surface of the ground, it is certain that the peach-borer is at work there under the bark. The simplest way to get rid of them is to use a small pocket-knife to cut away the bark and follow the burrows and destroy the borers, which, when full-grown, are over half an inch long and of a yellowish-white color. There are generally several borers in a single tree. If the trees are severely injured by the cutting, the wounds should be covered with clay or grafting-wax. Sometimes the cutting may be partly avoided by killing the borers in their holes with a wire.

Fire-blight.—E. I., Halsted, Kan. Fire-blight is the disease resulting from the growth of a very small, microscopic plant in the tissues of the plant. It is classed among fungus diseases. Its terrible destructive effects are well known to all who grow apples or pears in the western states. The disease spreads by spores, which are very minute and so light that they may float for weeks in the air. These spores can grow only when they find a favorable place on apple, pear or similar trees where there is moisture. On that account it spreads most rapidly in moist, warm weather, such as we have had this year. Some varieties of apples seem to be very liable to the attacks of the fire-blight, and are killed by it as soon as or before they commence to produce fruit, while others never blight more than a very little, and then only on the new growth, while others are seldom if ever attacked. The best treatment of fire-blight is to remove the diseased branch as soon as possible after its effect is seen. There is no remedy that will protect trees from its injuries. Trees that grow very rapidly are more liable to be injured than those making a healthy but not very rapid growth. On this account, many orchardists on rich prairie soil prefer to occasionally seed their orchards down, and thus check the growth.

Strawberries Not Fruiting—Raspberries Winter-killed.—F. S., Edmond, Okla., writes: "Two years ago I set out 2,100 strawberry-plants. They did well. The first season I pinched them back and did not allow them to fruit. Last season I had a very fine bed of plants that flowered profusely but produced no berries; I thought perhaps they were blighted. This season I have the same experience. I have a much larger bed now, but not a berry. They bloom and the berries form, then stop. I will enclose samples. The varieties bought were Captain Jack, Chas. Downing, Crescent and another variety. What is the remedy?—My red raspberries also act very strangely. I have 500 plants but get very few berries. They grow nicely, but during the winter the vines or stalks die down to the ground. In the spring, sprouts come up and bear a very few berries. What ails them? In Iowa, where I moved from, our red raspberries would stand the winter all right, and were sure bearers every year. Strawberries also did exceedingly well. One of my neighbors has strawberries in the same condition. I bought all from agents representing different nurseries. I took care in preparing the ground, and planting and cultivating my berries, but all to no purpose. My soil is deep, sandy loam, strong clay subsoil, mulatto color; just such soil as one would select in Iowa for successful berry culture."

REPLY:—I do not know the trouble with your strawberries, but think the varieties may not be true to name, and not good kinds. Perhaps you would find Michel's Early, an Arkansas berry, a far healthier variety than Captain Jack for a pollinizer. The two blossoms received from you were bisexual and pistillate, respectively. It is quite possible that the formation of the berries was interfered with by a late frost, or cold or very dry wind which came when the plants were in blossom.—Probably some other variety of raspberry would be hardier than those you now have. Or you may find it necessary to use winter protection for your raspberry-can.

Apple-tree Root-louse—Bisexual Strawberries.—J. H. M., Greensboro, Ga. Your apple-trees are affected with the apple-tree root-louse, which is a very great pest in many sections. The best remedy is to put a mulch of some sort around the trees, which will have a tendency to make the lice draw near the surface of the ground; after this has occurred, which will be in a few weeks, draw the soil away from the roots and pour scalding water on them freely, which will destroy the lice. If the young trees are weak from the attacks of the lice, it would be best to burn them and then plant new trees free from the pest. Where the trees bought are affected with the lice, the latter may be destroyed without injuring the trees by dipping the trees into hot water at a temperature of from 120° to 150°. There are many places in this country where the young apple-trees are dying from no apparent cause, being free from borers, while if the examinations of the tree were extended to its young roots, they would be found with many knotty swellings and covered with small lice having a bluish-white, cottony covering, and the source of all the trouble. This is not a new disease, but one against which planters cannot be too much guarded in buying nursery stock.—There is no male (staminate) strawberry-plant in cultivation, properly speaking. As regards the blossom, two kinds of strawberry-plants are grown: First, that commonly called staminate, or male—bisexual—perfect fertilizers. Examples of this form are such varieties as Wilson, Captain Jack, Parker Earle, Michel's Early and others. They all have female organs (pistils) and male organs (stamens or pol-

len organs) in every flower, and they produce fruit. Besides producing fruit they produce much more pollen (flower-dust) than is needed for their own pistils. They are not, then, male plants, for male plants do not produce fruit. The other class of strawberry-plants is that commonly called pistillate, or female, good examples of which are such varieties as Crescent, Haverland, Warfield, Bubach, etc. These varieties have pistils, or female organs, only, or else only a very few weak stamens in their flowers, which do not produce sufficient pollen to fertilize their own pistils, so if this class is to produce fruit, pollen must be supplied them from the first-named class. Now, as to your question. The plants that do not produce fruit are probably some pistillate or female kind which has not received enough pollen to fertilize its pistils. When you took up your strawberry-plants to reset them you probably set out the strongest plants, which were the pistillate ones, and the weaker ones that you threw away were the bisexual kinds, which were necessary to produce pollen for the other. This is a very common mistake among those without much experience in growing strawberries, for the pistillate kinds are generally the strongest growers. Now, your remedy is to get some good bisexual kind and set a new bed, having about one row in three of it and the rest of the pistillate kind, which you now have a plenty of in your old bed. The only way to tell whether a variety is pistillate or bisexual is by the blossom, which will be illustrated in these columns before it is time to plant another strawberry bed.

ARE YOU BILIOUS? THEN USE PARSONS PILLS.

"Best Liver Pill Made"

Positively cure BILIOUSNESS and SICK HEADACHE, all Liver and Bowel Complaints. Put up in Glass Vials. Thirty in a bottle, one a dose. They expel all impurities from the blood. Delicate women find great benefit from using them. Sold everywhere, or sent by mail for stamps: 25 cts. five bottles \$1.00. Full particulars free. I. S. JOHNSON & CO., 22 Custom House St., Boston, Mass.

THE GRANGER Evaporator

Fruit & Vegetable. For family use and small fruit growers. The Best and Cheapest in the market. Price \$3.50, 56 and \$10. Circulars free. EASTERN MFG. CO., 237 S. 5th St., Phila., Pa. Mention this paper when you write.

CIDER  **HYDRAULIC PRESS.**
MACHINERY.
POWER SCREW
HYDRAULIC OR
KNUCKLE JOINT
Graters, Elevators, Etc.
Boomer & Boschert Press Co.
99 W. Water St., Syracuse, N. Y.

A ROAD WAGON

\$32.00  To introduce our goods, we will give FREE. one of these elegant Road wagons to any one who will sell Six (6) for us. Regular price is \$65.00, we sell it for cash with order for \$32. If you are looking for a bargain in Vehicles or Harness send for our free catalogue. FOSTER BUGGY & CART CO., 23 Pike Bld. Cincinnati, O. Mention this paper when you write.

THIS PAPER One Year Free

To any one sending us only one NEW yearly subscriber at the regular price, 50 cents, for the paper alone.

This offer is good now under the following conditions:

The NEW subscriber must be a person whose name is not now on our list, and must be a person whom you have sought out and solicited to take the paper and who has consented to receive it. A change from one member of a family to another is not securing a NEW subscriber.

The new subscriber will receive the paper a full year for the regular subscription price, 50 cents, but will not be entitled to any present or premium with it except upon payment of the full "Price, including one year's subscription." For example: Premium No. 539, Perfection Hammock, and this paper one year for only \$1.50; or, "Uncle Tom's Cabin" and this paper one year for 60 cents.

Send us a new subscriber under these terms and we will send you the paper free for one year as your reward.

This offer must not be combined with any other, and applies to this paper only.

Accept it now, while it is good. It may be withdrawn.

We have an office at 927 Chestnut Street, Philadelphia, Pa. also at Springfield, Ohio. Send your letters to the office nearest to you and address

FARM AND FIRESIDE.
Philadelphia, Pa., or Springfield, Ohio.

Our Farm.

INTRODUCTION OF BREEDS OF SHEEP INTO THIS COUNTRY.

INDIGENOUS SHEEP.

There are no breeds of sheep indigenous to this country except the "bighorn" of the Rocky mountains. There are accounts of "woolies," by the voyagers under Caronado, in the region known now as Arizona, in about 1560, but the Spaniards did not see the animals, though they saw the fleece and pronounced it wool; they saw the horns, and the historian of the expedition says of them: "They were enormous." The Indians told the Spaniards their sheep were as large as the Spanish horses. Of "woolies," Captain DeBonneville tells us they were quite abundant in the Rocky mountains. He speaks, also, of the Rocky mountain sheep.

INTRODUCTION OF DOMESTIC SHEEP.

The domestic sheep (*Ovis aries*) were brought here by the first Spanish colonists, and are said to have been introduced by all of the first colonists from the land from which they came. It is or has been considered safe to assume this as a theory, at least when no direct evidences are known. It seems strange that so little is now positively known of the introduction of domestic sheep prior to the beginning of this century, except by the Spanish colonists. Without telling us where they came from, Col. Switzler, statistician to the treasury department, in the report he made on wool and manufactures of wool, in 1887, says: "The first sheep introduced into the colonies were brought from England to Jamestown, Va., in the year 1609." These few, he tells us, increased by 1649 to 3,000 head. He says, too, that in 1633 a few sheep were brought from England to Massachusetts, and that these also increased to 3,000 head by 1640. In 1625 some sheep were brought by the Dutch colonists to New York, but they proved unsuccessful. In 1663 the Swedes introduced 80 sheep into their Delaware colony. These sheep were of no known breed, and their wool was coarse and the sheep inferior.

IMPROVEMENT OF SHEEP.

The first concerted action for the improvement of the stock of sheep seems to have come from the Society for the Promotion of Agriculture, of South Carolina. In 1785 this society offered a medal for the first flock of Merino sheep kept in the state; but there were no Merino sheep introduced into any of the states until 1793. These were by Wm. Foster, of Boston, Mass. In 1801 M. Dupont de Nemours and M. de Lessert imported four ram lambs; only one of these arrived safely in this country. This was known as the ram Don Pedro, and became the sire of many fine-grade flocks near Wilmington, Delaware. Some have believed this ram was of the French Merino blood, but Dr. Randall conjectures that this ram was from the original Spanish, and not from French stock. The same year a pair of Spanish sheep, which had been brought from Spain into France, were imported by Seth Adams, of Zanesville, Ohio. In 1802 two French Merinos were sent by Mr. Livingston, American minister to the court of Portugal, and arrived safely on his farm in New York, and became quite popular. Wool from the full bloods of this flock sold for \$2 and \$2.50 per pound. This was during the war of 1812. Col. Humphreys, American minister in Spain, later in the year 1802 sent home twenty-one rams and seventy ewes, bought for him in Spain. In 1803 two black Merinos were sent to Philadelphia by Dr. James Mease, and by Mr. Muller a small number from Hesse Cassel, in 1807. According to Dr. Randall these sheep have descendants that promise to aid in revolutionizing the Merino sheep husbandry of this country. In 1809 and 1810 M. Jarvis, consul to Lisbon, purchased and sent to the United States 3,850 Merinos, selected with the greatest care from the best Spanish flocks. It is believed 5,000 of these Spanish Merinos were imported into this country by 1810 and 1811.

IMPORTATION OF OTHER BREEDS.

Col. Switzler says at an exhibition of the Merino Society of the Middle States, in October, 1811, there were specimens of the Irish Tunisian, or Barbary, New Leicester, Bakewell, or Dishley, and Southdown breeds.

In 1823 the Saxon Merinos were imported. The history of American sheep husbandry during those years is very interesting, but does not belong to this paper.

The French Merinos were introduced in 1840 by O. C. Collins, of Hartford, Conn. These came direct from the national flock of Rambouillet. In 1846 Mr. Taintor, of Hartford, Conn., commenced an extensive importation of French Merinos.

The Silesian Merinos were introduced by Mr. William Chamberlain, of Red Hook, New York, in 1854.

The Leicester sheep came down to us associated with the patriotic industries of George Washington. Livingston, writing in 1809, says: "The Arlington long-wooled sheep, bred by Mr. Curtis, were a cross between a Persian ram and Bakewell ewe."

A Mr. Lax, of Long Island, smuggled some Leicesters into the United States about 1810. Mr. Christopher Dunn, of Albany, New York, obtained the first of his long celebrated flock from Mr. Lax. In a note by Dr. Randall as to this flock, he says he commenced crossing it with a Cotswold ram in 1832.

During the war of 1812, with England, some choice Leicesters on their way to Canada were captured by one of our privateers and sold at auction in New York, and thus became scattered throughout the country. Some sheep of this family were also early introduced by Captain Beanes, of New Jersey. He also introduced Teeswaters and Southdowns. Some Teeswaters are said to have been included among the sheep captured, as above stated, by a privateer, in 1812. No doubt many other small lots of these and other British breeds of sheep, also Spanish sheep, were obtained during this period of our history.

The first considerable importation of Cotswolds was in 1840, by Hon. Erastus Corning, of Albany, New York, and William H. Sotham, whose name is well known among live-stock breeders throughout this country. More recently large numbers of Cotswolds have been obtained in Canada.

The Lincoln sheep were introduced by Mr. Leonard D. Cliff, of New York, in 1835 and 1836.

The New Oxfordshires, or Improved Cotswolds, were introduced by Chas. Reybold, of Delaware, in 1846.

The Black-faced Scotch sheep were tried in this country about 1860-'63.

The Cheviot sheep have long been tried in New York. Mention of them is made in "Sheep Husbandry of the South," by Dr. Randall, in 1848. Their popularity has been maintained, if not increased, by some very enterprising breeders of New York.

The Southdowns were imported, and attracted attention near the year 1830, by such men as John Hare Powell, of Pennsylvania, Francis Ratch, Esq., of New York. Extensive importations of the very best Southdowns were made by Mr. Thorne, of New York, Mr. Alexander, of Kentucky, Mr. Taylor, of New Jersey, and others. This breed of sheep, like the Merinos, has steadily increased in public favor.

The Hampshiredowns were imported in 1855 by Mr. Thomas Messenger, of Long Island.

The Shropshires were imported as early as 1861, and have continually grown in demand.

The Oxforddowns were first introduced into the United States by Richard S. Fay, of Lynn, Mass., and Hon. William C. Rives, of Va. They are well reported in 1862.

Within the last decade the Horned Dorsets have been introduced, and seem to have special characteristics that entitle them to a valuable place among breeds of sheep for raising spring lambs.

The American sheep raiser has missed no opportunity or breed of sheep to gain a point, whether of fancy or usefulness. The little, tiny Shetland sheep as a curiosity, and a cross between the Rocky mountain sheep and the domestic sheep, may be mentioned in this connection.

The collection of sheep that may come to the Columbian world's fair in 1893 will be looked over with a certainty of finding buyers among the American sheep raisers, who miss no opportunity of finding a breed of sheep that promises to live.

R. M. BELL.

"RING-DOVES."

The ring-dove, so-called, perhaps mis-called, is the smallest dove, or pigeon, in the cote. It is light drab in color, with a brown or black ring around the neck. It is probably a kind of wood or wild pigeon that has been and is much admired by some fanciers.

But whatever its history or name, it has many points of interest, and is one of the more favored "toys." The note of the dove is more musical than that of any other pigeon; it is more voluminous, and a little study might result in reducing it to a definite scale. It has a liquid smoothness of flow, an inflection that is very agreeable. No one is ever tired of listening to its soft cadence.

But the dove, while it is beautiful in appearance and has a most melodious voice, may be called the champion fool pigeon. It is easy to imagine the fan-tail pigeons as lacking in intelligence or pigeon sense, but even the fans have sense or instinct enough to fly from danger. The doves, however, appear to have no instinct that teaches self-preservation. Those in the possession of the writer would not move at the approach of cat or dog; they would apparently wait to be caught. This may have been due to the fact that these doves were petted and made very tame; yet all that I ever owned were alike fearless of everything.

The most satisfactory way to keep them is to let them fly. Once "wonted," they will not leave the place, and the melodious note will come from the tree-tops all summer. But this is generally impossible owing to their lack of fear. The home cat, if reared from a kitten with the doves, may be taught to keep hands off, but there is no protection from the stray cat and the hawks.

A pair was liberated at a farm-house. One was caught immediately, but the other lived several years, spending the summer in the trees and the winter in the house in a cage. This one was a little wiser than other members of its family, for it never flew to the ground except to the center of the poultry flock at feeding time, where, under the fowls and between their feet, it was safe.

This lone pigeon, with its melancholy coo, was very tame and friendly. When any one came out of the house, the dove flew down to hat or shoulder, and would there remain, bowing down its head and cooing, although the person on whom it perched might walk across the farm. When the family went to town, the dove usually accompanied part way, perching on a shoulder or hat. When the surrounding objects became unfamiliar, the dove returned home.

To show how foolish or fearless the dove may be, this fact may be told: I have held a cat in my lap with one hand, while on the other perched a dove, and the dove, to make its note, would lower the head and rest the bill on the cat's nose. If the cat's mouth had been open, the dove might thrust its head in if in the way. But the ring-dove is a pretty pet, and more satisfactory in the keeping, if it can be kept, than larger pigeons.

GEORGE APPLETON.

SEED TESTING.

As prevention is better than cure, would it not be well for propagators of seeds to be more careful in selecting good stock from which seeds are to grow? In order to encourage this, people purchasing seeds must pay more for them than is now charged. As vegetables and roots are now raised, not more than one bushel in ten is fit to set out for seed; whereas, in order to make seed-raising pay, the entire crop is now set out, most of the seed thereof growing, but producing an inferior product or progeny.

It must be apparent that to have good, sound progeny there must be good stock.

A proper knowledge of how to select this stock is most desirable, and can be learned very easily. J. S. TIBBITTS.

Michigan.

EXTRACTS FROM CORRESPONDENCE.

FROM ARKANSAS.—I would like to state some facts about Grand Prairie. I came from Nebraska and have been in Arkansas nearly two years. If the people in the West knew of the capabilities of this country we could not find room for all who would come here. Cotton is now grown at a loss, but farmers are doing well with other crops, as our markets are so much better than the West. Oats this year yielded enormously. Fifty bushels of corn per acre is not an extra crop, and we get

from 50 to 75 cents per bushel for it. Sweet potatoes are in their element in this soil; to see the great, yellow yams roll out from the digger as you drive along is a rich treat. What about taking stock from the North? I would say that horses especially are very liable to die if worked hard the first year, and I would advise persons moving to Arkansas to sell their stock and buy after coming here. Some ask about the price of land. Land is bound to go right up when the railroads that have been surveyed are completed. Dewitt, the county-seat, is to have at least two main lines in the near future, and land that could have been bought for \$5 per acre two years ago is \$10 now. J. R. A. WORTH.

Dewitt, Ark.

FROM ILLINOIS.—Grundy county is situated in the northeastern part of the state. Morris, its county-seat, is situated on the Illinois river and the C., R. I. and P. railroad, about sixty miles from Chicago. The population is about 4,500. Wheat, rye and timothy made fair crops in this vicinity; corn is from ten to fifteen days late, but growing rapidly; oats will average only about half a crop, owing to the vast amount of rain which fell in June. Morris, Ill. R.

FROM MISSOURI.—Howell county is situated in the southern part of Missouri. This is a timbered country. Cattle and hogs run on the range the year around; when there is plenty of mast the hogs fatten without any corn. Last year was a dry year, but this year we have had plenty of rain, and crops look well. The fruit crop fell short this year. Fruit of all kinds does well. The winters are mild. Wild game is plenty. Wheat and corn are the principal crops. The greatest drawbacks to farming are rocks and stumps, but the soil is productive. C. H. M.

Brandville, Mo.

FROM MICHIGAN.—Heavy clay and flat lands have been difficult to till on account of heavy rains. Many fields of that kind remain untouched. Grass grew early and vigorously. Wheat, oats, rye and grass are excellent, but harvest was late. Corn and potatoes have made small growth for the time of year, but are growing well now and look well. There is considerable complaint of old potatoes rotting. Small fruits are very abundant. Peaches are not grown here. Apple-trees were very full, but in many places the apples have mostly fallen off. Plum and cherry trees were well loaded. H. C. P.

Big Rapids, Mich.

SOUTHWESTERN NEBRASKA.

RED WILLOW COUNTY.

The county is located in the far-famed Republican Valley, which is so widely and justly known for its beauty and fertility. The river runs through the central part of the county and a number of streams empty into the river in the county. Timber grows along these streams where wood can be had at a dollar a load and posts at six cents apiece. The prairie is fine farming land. Many thousands of acres are beautiful slopes, sloping just sufficient for good drainage; nine tenths is self-draining. The soil is a dark loam three to five feet deep; fine, very easily worked and remarkably productive. Last season many wheat fields yielded thirty to thirty-five, and some forty bushels per acre; rye, twenty-five to forty; oats as high eighty, and corn seventy-five. Present crop prospects are fine. I farmed 28 years in Iowa and 11 here and have raised as good crops here as there. There are no ponds or sloughs; no gumbo, hard pan rocks, gravel or sand in the soil. Timothy and clover do well, but alfalfa is the grass here. It is cut three times a year, and yields about two tons each cutting. It is preferable to timothy or clover for either grass or hay. The climate is fine, air light and pure, no malaria or throat and lung troubles; asthma and ague are unknown; winters are mild and short and spring opens early. Seeding commences in January, and some plowing was done and some wheat sown in January last. Frost seldom comes until October. I never saw any soft corn here. Indian summer lasts eight to twelve weeks. Stock graze on the prairie nine months in the year; for twelve years stock have not been fed three months in a year. For raising and feeding stock this is the stockman's home. Apples, crab-apples, cherries, plums, pears, peaches, apricots and small fruits are raised. The county is settled mostly by Americans. School and church facilities are good. Taxes are low, six dollars to twelve dollars per quarter. The country is new and land is cheap, some quarters of good land partly improved, within five to eight miles of the station, can now be had for eight to ten dollars per acre: \$400 to \$800 cash, balance time. One tract of 576 acres, all level bottom land, fenced, timber and water, frame house of five rooms, barn, etc., can now be had for eleven dollars per acre; one third cash, balance three to four years at seven per cent. Land is going up quite fast and the sooner bought now the better. It is cheaper now than it will ever be again. If those wanting to buy land here will call at my farm, seven miles northwest of McCook, I will show them the country, except Sunday, but will on no conditions show land on the Sabbath. Those coming here will find the Commercial Hotel in McCook a good place to stop. Letters of inquiry enclosing stamp answered. Box 13, McCook, Neb. WILLIAM COLEMAN.

Our Fireside.

AFTER ALL.

She loves me now. She kneels beside my bed.
Her precious kisses bless my hands, my brow!
There is no shame in such a passion now,
For I am dead.

The blinds are drawn; a cross is at my head,
And through the window, just two inches raised,
There steals all sweets that ever birds have praised;
But I am dead.

My ills are all forgiven; with faltering tone,
Love, where least looked for, finds some good to say
And all are kind, as on a child's birthday
No faults are known.

With streaming eyes, and piteous bent head,
She comes too late. Not even that word is sad.
I do not know; I do not wish I had,
Now I am dead.

I cannot answer to her agony;
In this great space of peace it makes no stir;
And in good time the Lord will comfort her,
Who comforts me.

—W. St. Leger, in *Black and White*.

A NEW CINDERELLA.



"Isn't it lucky, Mrs. Caryl," I remark, languidly, "that Anne belongs to the commonplace, laboring half of humanity? Really, I don't know what would become of us girls if Anne hadn't a taste for rough, coarse work and was a mere lily of the field as I am."

"Some people," says Mrs. Caryl, grimly, "consider Anne not only more useful but infinitely more ornamental than yourself."

I open my blue eyes widely.

"Mrs. Caryl, you're joking! Anne, so cold and grave, and with the air of Maria Antoinette going to the gallows! I assure you, that style isn't at all admired just now. Girls must be bright and piquant, above all things."

"It's very kind of you to inform me what is correct," responds Mrs. Caryl, with a horrid sarcastic smile; she has seen Paris, New York, London, while I have never been out of the little Florida village which Mrs. Caryl and some scores of her kind have recently discovered to be a pleasant winter resort. "Has it never occurred to you, Miss Kitty," she continues, severely, "that Anne has too much on her mind to be very light-hearted? If you would share her burdens and let her share your pleasures she might be gayer."

I shake my blonde head.

"I couldn't help Anne, Mrs. Caryl; she is just fitted for dusting, sewing, cooking. That sort of thing would kill me. About her sharing my pleasures—I don't think she would care to, she's so much older than I. Anne is quite old—nearly twenty-eight."

An increase of irritation is perceptible in Mrs. Caryl's face, and I reflect that a woman of fifty does not relish hearing that one of twenty-eight is old. But it is impossible to retract my hastily-spoken words.

"There is one pleasure approaching which I intend your sister to enjoy, at all events," says Mrs. Caryl. "The guests at the hotel are arranging for a ball to be given in about two weeks; not an ordinary hop, but as near the real thing as can be managed in this out-of-the-way place. It is to be a costume ball, without any masks—"

"Anne, Anne," I cry, as my sister comes up the walk, returning from her morning marketing. "Only think, we are to be asked to a grand ball and we must go—oh, we must!"

Anne enters and salutes our caller with polite deference.

"I am very sorry," she says, "but really, I am afraid we shall not be able to go."

"I hate pride, Anne, it's abominable," I say. "Why don't you speak out boldly and tell Mrs. Caryl we have nothing to wear?"

"Pride is not such a bad thing," observes Mrs. Caryl, who possesses a vast amount of that quality herself. "But is it indeed so, Miss Gresham? Have you not, like the girls in stories, trunks full of your grandmother's laces, fans, brocades, up in the garret?"

"Our little house does not even boast a garret," Anne says, lightly. "And you know, Mrs. Caryl, the income from father's life insurance is only just sufficient to maintain us with the very strictest economy, so we have long ago been obliged to use up the ancestral fineries."

"I dare say you have displayed admirable ingenuity in the task," says Mrs. Caryl, courteously. "Now, I want you to let me be sort of fairy godmother to you."

I cannot for my life help giggling, for she weighs fully two hundred pounds.

"You are not much of a fairy, are you, Mrs. Caryl?" I say innocently.

"No, my dear," she answers sweetly, "but I should like to be a grandmother, or stepmother, or godmother to you for a few months. I was about to remark," she resumes, addressing Anne, "that I happen to have with me two dresses which I shall never wear again—one a pale blue and the other a peach-

blossom pink; and you are more than welcome to them. With your hair a la pompadour, and powdered, and the pink and blue satin combined in a pretty Watteau gown, you will make a charming marquise."

"Anne's hair is so dark it would require a great deal of powder," I say discouragingly.

"You are very kind, Mrs. Caryl, and I will thankfully accept the dresses for Kitty," Anne says.

"I do not offer them to Kitty, I offer them to you," Mrs. Caryl says, decidedly.

"The fairy godmother in the story showered her benefits upon the youngest sister," says Anne, smiling.

"Yes, but not merely because of her youth," retorts Mrs. Caryl, quickly. "I insist upon your using the dresses yourself. Kitty will do very well as Young America, with a simple white dress and tri-colored sash."

"Oh, I shall be all right; beauty unadorned is adorned the most," I say confidently. "You have not yet told us, Mrs. Caryl, if your nephew intends to stay for the ball."

"He expects to do so," she replies, "although he has already spent more time here than he can well spare from his business. I wonder whose fault it is?"

She looks at us girls and laughs, and as her eyes meet mine I feel that I am blushing very prettily. Then she departs, and in an hour or so sends the dresses over to our cottage. Pearl beads and creamy lace are not lacking, and Anne proceeds at once, with quite a show of interest, to design her costume.

For two weeks she spends every moment she can spare from the household duties upon her dress. She doesn't seem to mind it. She keeps singing all day long, and her cheeks have a great deal more color than usual. Perhaps she is happy because she thinks that for once, for just one evening in her life, she is going to look pretty.

Every day she offers to desist from her labor and help me with whatever I elect to wear. But I utterly refuse to do or even to plan anything, and Anne, unassisted, gets my white dress in order and makes the sash and little tri-colored cap Mrs. Caryl suggested. I do not mean, however, to wear them. As if I were going to be seen on the last evening of Laurence Caryl's sojourn among us dressed like a shabby school-girl! No, if Anne succeeds in making the marquise dress pretty I shall wear it—we are just of a size—and she can stay at home.

I announce this intention early in the eventful evening, and Anne turns around from the mirror with an angry flash in her eyes.

"Kitty, surely you won't be so selfish! You know I never can refuse you anything; surely you won't ask this!"

"I can stay at home," I say firmly; "but wear that old white rag I won't, while you look like a queen."

"Oh, Kitty," she says imploringly—she is always a poor, weak thing with me, in spite of her grand airs—"don't be so cruel! I must go to-night; I promised Laurence Caryl that I would."

"He will never miss you, my dear," I laugh, "for he made me promise the very same thing, with oh, such a look in his eyes, Anne! Won't you be rewarded for staying at home if I return his engaged wife—Mrs. Laurence Caryl that is to be?"

Anne just sinks down on a chair and does not speak for a full minute, during which I begin putting on her old kid slippers, which she has neatly covered with pink satin. At last she says faintly:

"Is that why he has been here so much—why Mrs. Caryl has been so kind?"

"What else did you think it could be?" I query gaily. "Did you think they were going to adopt me?"

"You may have the dress and welcome, Kitty," she says, after another pause; and she helps me with my hair and flowers so deftly that I tell her she was born to be a lady's maid. Then the carriage Mrs. Caryl has sent arrives, and I step into it and drive off.

The ball-room is a scene of enchantment, and I revel in the sense that I am one of the fairest things in it. I do not heed Mrs. Caryl's indignant glance at her quondam dresses, nor her frigid inquiry for my sister, to which I truthfully reply that at the last moment Anne changed her mind about coming, so we concluded I might as well wear her costume.

In books the hero always declares his passion in a crowded ball-room, as if he never hoped to meet his lady in a more eligible spot. Laurence does nothing of the sort. But he is most attentive, and when I am departing I declare there has not been one blemish upon a perfect evening. I pause an instant on the carriage step to fling back a laughing word, then as I spring in I notice that my slipper has dropped off my foot.

"Cinderella, Cinderella!" some one cries.

Laurence snatches it from under the wheel, averring that he will keep it for a sonvenir. He looks very handsome as he stands in his black velvet suit in the moonlight.

Anne's door is locked when I reach home, and she is too sleepy or too sulky to speak to me. Late in the morning I rise, throw on a wrapper, and am just attacking my tangled yellow curls, when a man's step crosses the veranda and enters the parlor, which my bedroom adjoins. Then I hear Laurence Caryl say brightly:

"Good-morning, Miss Gresham. Do you know, I was so annoyed at your not caring to

come to the ball last night that I fully intended to take the earliest homeward train to-day? But this little article made me fancy you had a valid reason for your absence."

"A slipper!" says Anne, bewildered. "Mine—for here's my name inside. I suppose you think it's very silly, Mr. Caryl, to write one's name on gloves and slippers."

"I understand it perfectly," he says coolly. "You would never be allowed to call anything your own were it not plainly marked. My aunt and I thought at first, last evening, that you had all along meant your sister to wear the dress; but we finally agreed you had been cheated out of it when we saw your name in the slipper she dropped."

"Kitty is a veritable Cinderella," says Anne. "When Cinderella's finery fell off and left only her wretched rags, she couldn't have looked more hideous than Kitty did last night to us, stripped of all her babyish ways and her beauty, with nothing present to our contemplation but her shallow, selfish little soul," observes Mr. Caryl. "There, don't be angry; I won't say another word. Come out with me for a drive."

"I wish you would take Kitty; she was out so late last night it would do her good," says that ridiculous Anne.

"I tell you I won't have Kitty at any price," says Laurence, laughing.

So they go out together, and in a moment I rush to the parlor window and watch them drive off over the shining, snowy sand, in among the fragrant pines with their lace-like drapery of moss.

Our clock is not a giddy little French affair, but a sedate and decorous timepiece, which has never stooped to utter any slang expressions. Yet this morning I can swear that it solemnly ticks over and over again: "Did you ever get left?"

THE HUSBAND'S PEOPLE.

No one who is acquainted with the world will have any other feeling than that of tender solicitude for the young wife who is about to leave her own home and go into the world of her husband's relations. She leaves a home where it is very likely that she has been the bright controlling principle; where much has bent to her interest or her wishes; where her young life was a precious and a delightful thing; where it was all a little kingdom into which she was born; where everything came to her with love upon its wings; where she never had to make an effort to win affection, since it was hers by right divine; where she was happy, and yet unconscious of it—as unconscious, too, that the world could ever be anything else—as when she was a baby in her mother's arms. She goes into a world, so far as all these influences are concerned, where all is unknown and untried and obscure. It may be friendly, it may be hostile; it is certainly critical. While she was at home, she had her lover's love with everything else; that sunshine still surrounds her, but all the rest is dark.

If now she wishes to keep that sunshine, the plain course before her is to make her husband's people love her as her own people do, not thinking, of course—with the old belief in blood as thicker than water—that the new love can be quite the same as the old, but sure that it can be very strong and fervent. She may, and probably will, keep the sunshine without it; but it will assist her and make all her way to do so easier.

Of one thing the young wife may be sure to begin with—the new father is ready to give his new daughter all the homage of his heart, as a father should. He feels for the father who has lost her; he sympathizes with his son who has won her; he remembers what all that bright part of life was to himself; he experiences a warmth of protecting tenderness toward the young being who makes his boy so happy; he likes to receive her affection himself; he looks forward to countless satisfactions that she is to bring him; he does not mean to let his own strong-willed or petted girls impose upon her or domineer over her, or to have any favoritism shown between them; he knows how hard it would be for him if one of these petted girls, going into a strange family, met with anything but genial welcome there. And if there are no girls of his very own, strong-willed or otherwise, then what a treasure this daughter is! He is so grateful to his son for bringing such a joy into his days that the boy borrows of her radiance and gains a new respect. He opens his arms to her; he is all ready to prostrate himself before her, and to let her walk, like a young queen, over his life; he is her knight, her champion, her friend, her father. And if there are no daughters, then the mother's heart, too, warms toward her in an exceeding degree. That mother is going to have what she has wanted so all her life—a daughter.

But if, in any event, the new mother scans this young wife carefully, with a woman's eye for the womanly, it is not for her own sake that she does this, but with a jealous eye to her boy's happiness; and if she sees that her boy has chosen wisely, then there is nothing too good for his choice. There are, it is to be admitted, cases where the mother is not able to endure the thought of any one's being before herself in her son's heart, forgetful that the love a son gives a mother who deserves it is of a different nature from that which he gives the wife who becomes his other self, and in no wise conflicts with it, and that almost invariably, and unless the mother be a selfish

anomaly, the son who best loves his wife best loves his mother also. But it is to be hoped that these cases are few; and, indeed, most frequently the mother receives this new daughter, whether she has daughters of her own or not, with a peculiar affection, that if it is not just what she gives her own, has a quality that is very precious, both to giver and receiver. For her relation to her own daughters is one of more or less authority; the reverence that is her due she would almost be willing to exchange for companionship on terms of equality; and here is something a little like that; here is some one to whom she can give her confidence, and who may fill the yearning of her heart for an admiring friendship, with whom there is the bond of a similar experience, and all the time that other bond of their mutual love for the best, the greatest, the dearest being in the world to both of them.

The young wife who leaves her own family in a measure, that is, in its close daily life, and enters largely, as she must needs do, into the life and circumstances of another family, will do well for herself if she take with her a determination to love and to be loved there. It is an ill-advised who cautions her to stand upon her rights, and to let others observe in the beginning that there is to be no interference. It is time enough to resent interference, if it is of the unwarrantable sort, when it comes. To go bristling all over with arms and armor is to invite attack anywhere. She should remember, too, that sometimes parents have the right to interfere. Even if the interference comes at last, even if it be ill-judged, she will do better to meet it gently than to repel it forcibly. She will be wise to look at the possibilities of her future, too, and to see the folly of weakening any of the anchorages, as one may say, of her husband's life; to see the better part of increasing his love and fealty to his own people, to appreciate the help they will always be eager to give her in strengthening the good and repressing that which is not so good; the restraint they will be in case of need, the wall of support to all her endeavors. And even if she never require any help of the sort, and the very thought of it be a profanity, she should convince herself that her husband's people have, before anything is said, a right to her affection. They are the ones of whose flesh and blood, of whose life and manners, of whose thoughts and principles, was born that which is most precious of all the universe to her; they cannot be quite unworthy of some portion of that which their son evokes. Sometimes she will find these good people aching for her love; and whether they are so eager as that or not, if she only give it to them with a quick and tender heart, taking theirs for granted, whatever are her imperfections they will be forgiven, whatever are her excellences they will be exalted, and she will make for herself and for her husband a happiness far exceeding that to be had by any other course.

THE WOMANISH WOMAN.

She flits through the pages of romance as Amella Sedley, Dora, Mrs. Nickleby, and many another heroine. She meets us in every-day life, and is far less amusing there.

The essence of that delightful femininity which she typifies to herself is unreasonableness.

Your unreasonable man is, without doubt, simply and supremely hateful; in society, a sort of modern satyr, with every hoof roughshod to trample down the opinions and feelings of people; in his family, a monster of selfishness.

But your unreasonable woman—and here comes in the greatest of sex distinctions, if science did but know it—sweet-tempered, angelic, your unreasonable woman soars light-winged above all law. Poised in the empyrean, she even assumes that power which only the most daring conception of the most daring philosophy has awarded to Divinity itself—she lightly reconciles contradictions.

It is her glory to be guided solely by instinct, feeling. Detractors may point out that this guiding star of hers is, nine times out of ten, the veriest jack-o'-lantern light to lead her into quagmires. Nevertheless, she follows it with unwavering enthusiasm. For the one thing she never by any possibility does is to learn from experience.

Very early in life—in what manner is of little consequence to any one, to herself least of all—the womanish woman becomes equipped with a complete set of beliefs and prejudices. The prejudices she values most, as being in their nature most womanly. And it is her pride and delight, down to hoary age, to apply them at random to man, woman, child, book, house, town—all the objects that meet our race in its mortal career. "Why do I dislike him? My dear, it is quite impossible for

For Rheumatism
sciatica,
rheumatic gout,
neuralgia, dropsy, and
white swelling,
use

Ayer's Sarsaparilla
Cures others, will cure you

me to say. Yes, I admit he is very good, amiable, talented—everything you please. All the same, I can't like him, and I never shall." And by that serene smile you may know it for the truth.

Opinions and prejudices once her own, she proceeds to identify herself with them, body and soul; and for them collectively, or taken one by one, she will lay herself—yes, and she will lay everyone else—upon any altar of sacrifice.

This is a fact which the masculine mind is slow to see. Hence, when an intelligent man marries a womanish woman, tragedy begins. The husband cannot comprehend that every opinion and belief his wife holds is necessarily pet and personal. But when he attempts to scientifically demonstrate to her that the moon is *not* made of green cheese, she cannot consider him anything but a boor and a brute: He sneers; and the stronger man he is the more uncompromisingly he sneers. She weeps. When she magnanimously resolves to forgive, by universal testimony she is "the best-hearted woman in the world," when she forgives, and tries with old blandishments to melt him into penitence, his respect cannot be so bought back, and he is overwhelmed with fresh reproaches. Ah, the womanish woman may be very charming abroad, with her daring, her inconsequence, her caprices. She may dazzle the eyes of growing boys and lead soft-headed men in an admiring train. But at home she is likely to be the despair and ruin of the man who has married her.

She is an uncomfortable friend.

It seems base to assert it, in view of the sacrifices she has gladly made, the burdens she has cheerily borne, the heroism she has devotedly exercised in your behalf—whether necessarily or helpfully matters little here, and matters little to her. But it is true.

She has positive opinions about everything and everyone connected with you; as that your docile girl is a Tattycorum for temper; and that your second boy, devoted by manifest destiny to mechanics, is flying in the face of Providence by not entering the ministry. And these opinions, which at first you lightly enough set aside, have an odd power of identifying themselves with their objects, and perpetually annoying you.

To reject her lavish advice without offending her is a life study. And many other pitfalls lurk along the path of your friendship. For if the womanish woman has one gift or grace above another, it is sensitiveness. Why was her last letter so long unanswered? Has it actually come to "Dear Mary?" It used to be "Dearest Mollie" in the old days. Then, if things were quite the same, why this strange reserve? And such a criticism of a beloved book has cut her to the heart.

Indeed, the state of being "cut to the heart" is apt to become chronic with the womanish woman. She comes to count it as a chief source of mental excitement and stimulus, shut out, as she is, from the normal joy of mental growth.

She never changes. She is so sure that to be womanly is to be supremely and exquisitely womanish, that she regards any other kind of womanhood as insensate and unspiritual.

Her absurdities she cannot see. If you were to draw them to the life, she would only break into laughter, and naively ask, as the real Mrs. Nickleby did actually ask Charles Dickens: "Is it possible there can be such people in the world?"—*Harper's Bazar*.

PURPLE AND FINE LINEN.

There is no other fabric in the world that has such a history of its own and such a part in the world's history as linen has. No one knows at what point of primitive life the savage found the wool of his sheep preferable to its hide, nor just where linen came like a new dispensation over that.

Other plants besides the flax have come up since. The jute, whose leaves the East Indian eats like spinach, has an immense production to-day; and the common prickling nettle of our fields has been made into both cloth and paper. Indeed, the delicate Chinese grass-cloth, that looks sometimes like nothing more substantial than a hoar frost, is produced from a species of nettle, which is carefully cultivated and gathered three times a year for the fine fiber of its third inner layer.

But the use of flax once habitual, the improvements in the manufacture seem to have reached perfection at an early day in India, Egypt and Babylon. We read of Hindostanee muslin so fine that when spread on the grass and wet with the dew they were invisible. A Persian ambassador brought to his royal master a cocoanut enriched with jewels, in which was enclosed a turban muslin, thirty yards long, so fine that with closed eyes one could scarcely recognize it by the touch.

It was probably from the Egyptians that the Hebrews brought many linen-weaving secrets. The splendid hangings of the tabernacle in the wilderness, as well as the priests' robes, were of shining linen, and the high priest's girdle was of linen so curiously made as to suggest a snake's skin; these robes were afterward raveled to make wicks for the sacred lamps. The mufflers and veils and stomachers and turbans which made the picturesque toilet of the Hebrew women were all of linen; and it is fine linen that always moved the imaginations of their poets. Solomon, we are told, had veils and hangings of the softest linens wrought with exquisite devices; and that Egyptian princess who was his wife brought

with her from home dresses of linen whose sheer gauze was wondrously embroidered. Perhaps in the bales that came to her were the linen lawns from Tyre and Sidon, "so thin as to be transparent, and which glow with purple"—the gauziness of which such fabrics were capable is known now by a bit of fine linen brought from Thebes, which had in it five hundred and forty threads to the inch.

Both the Egyptians and Babylonians wove golden threads into their linen occasionally. Egyptian napkins embroidered with golden flowers have been found, and mummies swathed in gold-wrought linen. The Babylonian cloth with which one of Nero's dining-rooms was hung, worth nearly \$200,000 of our money, was doubtless of this description. The robe which Achan coveted was probably a Babylonian one—not of linen, however, but woven entirely of gold. Cato having inherited a Babylonian robe—perhaps of a similar sort—ordered it sold, as too costly for an honest Roman to wear. Indeed, many of the old Roman families regarded linen itself as something too luxurious and effeminate, and clung to their woolen robes long after the rest of the world wore the softer fabric. Ovid speaks of the priests of Rome as wearing linen, and probably the lawn of the Anglican bishop is the legitimate successor of that linen.

One is led to fancy that there must have been an immense manufacture of linen in Egypt from the character of the wrappings of the mummies, which had sometimes as many as forty thicknesses, and used three hundred yards of material. Many of these linen bandages were written and painted on with great delicacy. Indeed, linen was used instead of papyrus to some extent; the Sibylline leaves themselves are said to have been written on it. There seem to have been innumerable uses to which the Egyptians put the flaxen fiber. Among other things, they made of it very strong and wonderful nets; and they may be said to have invented the mosquito-net, as the fishermen used their nets by day and spread them over themselves at night to keep away the flying pests of the night-time as they slept.

As linen, having had its day, gave way a little before the advance of silk among the elegant, Pliny speaks with some mild contempt of the ladies beyond the Rhine, whose best wear was linen; but in the fit season it has always remained choice wear for the ladies beyond the Rhine from that day to this. Ben Johnson speaks of a table-cloth costing ninety dollars; and in his era a linen shirt, with its fine finishings, was worth ten pounds. A century later a weaver in Dunfermline, where the king sat with Sir Patrick Spence drinking the blood-red wine, wove a shirt without a seam, and finished without a needle, save for a button.

Linen is not cheap now, but it was mightily expensive in those old days. It was the expense of it so late as the time of Charlemagne that caused Voltaire to think many diseases of the skin then that went under the name of leprosy were due to the want of linen, probably as its want occasioned uncleanness and irritation. The habit appears to have been remedied afterward, although it took several hundred years to do it; for one of the officers of the household of Mary Queen of Scots, in her imprisonment, complained that she was allowed but sixty pairs of sheets, which was truly a beggarly equipment for royalty.

It was in order to encourage the manufacture of linen, a hundred years or more afterward, that the Scotch enacted a law forbidding one to be buried in anything else. Perhaps even in this there was felt, almost as strongly as the need of a prosperous industry, something of the pure and fine character of linen, whose preparation has left in it so little of soil and decay that it is the fit and symbolic drapery for the holy of holies, the only garment for the purified priest as he waits upon the altar.—*Harper's Bazar*.

A clever woman living in New York confided an ingenious plan of hers to me the other day. One of the best of managers, a most delightful housekeeper, always well dressed on not extensive means, with tastes not easy to gratify, she made this rule for herself, never to go into a shop but once a week. Every day, when the household affairs were being arranged, she looked to see what things were needed, marking especially those that seemed imperative. At the end of the week, before going out, she consulted her list, being always surprised to discover how many things could be struck off from it. She has found that the seemingly necessary were not necessary at all, and that old things in the house could easily be adapted to new needs. Few ideas would be wiser to follow, and the course is hereby suggested to the busy housewife.—*Harper's Bazar*.

Any of our readers who may be out of employment or in business that is not bringing them in good profits, should order an outfit of our picture, "Columbus at the Royal Court of Spain," and change their condition for the better. It is the best money-making business of the times. Two agents worked only eight hours and sold 52 pictures. This means for them over \$50.00 clear profit. Are you making more in that time? One lady received her outfit and sold 5 the first hour. \$5.00 an hour is certainly fair wages. See our offer on page 15 and enter the field yourself.

SOAP GIVEN AWAY

WHAT KIND

HOW MUCH

WHAT IT DOES

HOW TO USE IT

WHY IT IS FREE

HOW TO GET IT

Frank Siddall's soap—which is guaranteed to cut down the labor on wash-day so that a delicate woman or young girl can do a large wash without being tired. There is no need for women to injure their health by washing the old way.

A trial package large enough to do a very large washing if used according to directions. Every woman in the country may send and get the trial package **FREE**, but after that she must pay for what she wants if it suits her.

It does away with the wash-boiler nuisance and makes the clothes clean, sweet and white without boiling or scalding and without injury to the most delicate fabric. You must have soap, and this soap more than pays for itself by saving a large amount of fuel. It washes as well in hard water as in soft.

First—Put the clothes in a tub of warm water, rub the soap on them one by one and let them lie in the water for at least 20 minutes.

Second—After they have soaked the 20 minutes, rub out on the wash-board in the usual manner and the dirt will be found to **actually drop out** with less than half the usual rubbing.

Third—Rub them lightly on the wash-board through a clean rinse water—*this will take out the dirty suds*. (No other rinsing to be done.)

Fourth—Then put them through a Blue water and hang up to dry **without Boiling or Scalding a Single Article**, no matter how soiled some of them may have been.

We want the women to learn this easy way of washing clothes, and we are sure that if you will let your wash-boiler stay in the closet next wash-day, and give one fair, honest trial of this easy way of washing, that you will never go back to the old, hard, slavish way.

Make the following promises and a trial package will be delivered to you by mail, absolutely free. No attention will be paid to requests for soap where the promises are not made. It costs Mr. Siddall 30 cents for each package sent out, and he can only afford it when one package converts two families, as it is sure to do this way.

Write a postal card like this, filling in the blanks with your name and post-office address, and also your neighbor's name.

I promise to use Frank Siddall's soap, if sent free, on the whole of my family wash, **EXACTLY BY THE DIRECTIONS**, the first wash-day after I receive it.

Name.....

Post-office.....

County..... State.....

My neighbor, Mrs.....has promised that she will come and see the washing done.

Just think! Clothes washed clean, sweet and white in **LUKE-WARM WATER** and hung out to dry **WITHOUT BOILING** or **SCALDING** a single piece! Heat the washwater in a **TEA-KETTLE** and follow every little direction. Tell all your neighbors and friends to send to us a postal filled out as above for it. It will cost them nothing provided they make the promises.

In order that our subscribers may know that this offer is genuine, and because we want the women to learn this easy way of washing, we have agreed that the postals may be sent to us, and we will see that the soap is sent just as promised, and hope that many thousands of our subscribers will avail themselves of this generous offer at once.

Write your postal card as above and address it to

Publishers **FARM AND FIRESIDE**,
Springfield, Ohio.

Our Household.

HO FOR THE DESERT.

Oh, for the wild, woolly West!
Ye tender, come forth and invest;
Come fly up the flume
In the real-estate boom
Among the financially blest!

Oh, ho for this woolly, wild land
Of the lava-beds, desert and sand,
Where the ox lies stark,
And the coyotes bark,
And the horse is too small for his brand!

The brakeman rules over the train,
The sage-bush is lord of the plain,
The prairie-dog kneels
On the back of his heels,
Still patiently praying for rain.

So balmy and mild is the air
That the redskin needs only to wear
A cool tomahawk,
And a handy scalp-lock,
With a feather or two in his hair.

Then ho for the desert so blest,
In the heart of the woolly, wild West,
Where all things consume
With pereunial boom—
Ye tender, come forth and invest!

—Century Magazine.

HOME TOPICS.

SALADS.—A Frenchman, well versed in table lore as most of them are, will say that a salad is the crowning dish of the table, and an Italian will pronounce it the one essential to an epicurean meal. Americans are proving apt pupils, and salads are becoming a necessity on the lunch, the dinner or the supper table. Physicians have pronounced them healthful, and they may be made very ornamental.

There is hardly any vegetable, fish or fowl that may not be used in a salad, and of varieties of dressings there is no end. If one does not wish to make the standard mayonnaise, requiring much beating and careful preparation, a simple dressing may be made as follows, and by many is liked better than mayonnaise: Put a tablespoonful of butter in a saucepan with a teacupful of vinegar and half a teacupful of water; when it boils, add a teaspoonful of mustard and half a teaspoonful of corn-starch, moistened with a little cold water. As soon as this boils up, pour it slowly over two well-beaten eggs,



DRESS WITH BLOUSE BODICE FOR GIRLS OF NINE OR TWELVE YEARS.

beating all the time; then add one teaspoonful of salt and one of sugar; lastly, add half a teacupful of sweet cream slowly, and beat all together as you pour the cream in. This dressing will keep a week if kept on ice or in a cool cellar.

POTATO SALAD.—Slice cold, boiled potatoes very thinly, with a very little sliced onion, if liked, and thinly-sliced boiled beets or raw tomatoes for color. Over the top sprinkle some bits of parsley, and pour the dressing over just before you serve. Cold, boiled string beans, potatoes, asparagus, beets or cauliflower may any or all of them be used in a salad.

SALMON SALAD.—One can of salmon with all the oil drained off, one egg, two tablespoonfuls of vinegar, one quarter teaspoonful of salt, one half teaspoonful of mustard, one halfcupful of thick, sweet cream. Beat the egg, add one spoonful of vinegar, the mustard and salt, and cook in a double boiler, or a bowl over the tea-kettle, until it thickens; set it away to cool. Whip the cream to a stiff froth, and add it to the egg mixture when cool. Take out half a teacupful of the dressing, and add the other tablespoonful of vinegar and a tablespoonful of lemon juice to the remainder. Cover the dish on which the salad is to be served with young, crisp lettuce leaves; then put on a layer of salmon, pour over some of the dressing, then another layer of salmon, until all is used. Over the top lay some rings of hard-boiled eggs and some bits of parsley; then put the thick dressing saved out over the top. Any cold, boiled or baked fish can be used.

Garnishing or decorating salads affords an opportunity for displaying considerable artistic taste. Sprays of curled parsley, water-cress, pepper-grass, the fine, bleached tops of celery, nasturtium flowers, leaves and seed-pods, sweet-pea blossoms, rings of hard-boiled eggs, rings of pickled olives or cucumbers, and fancy shapes cut from boiled beets or carrots, may be used with good effect. An attractive appearance adds much to the salad. If parsley seed is sown now in a box, it may be kept in the kitchen window all winter, and serve many a purpose of flavor for soups, gravies, etc., and for garnishing. In boiling chicken for salad, if they are put to cook in cold water, the meat will be whiter, and nearly the whole of it can be used in the salad.

Try, this hot weather, having a nice salad for supper, instead of hot vegetables, as is common in many farmers' houses. It can be prepared while getting dinner, and kept in the cellar until supper-time, pouring the dressing over just before bringing it to the table.

THE CHILDREN.—By this time vacation has lost its novelty. Children must be busy, and if their activity is not directed into a healthful channel, it is apt to lead them into mischief and trouble. The mother who keeps their little hands occupied in her service for a part of each day is not only keeping them out of mischief, but using an influence that will be for good in future years. Don't make it a drudgery or a task, but study each one's tastes, and as far as possible let the work be congenial, though a little self-sacrifice will also be good for them. Let them amuse the younger children, keep fresh flowers in the house, set the table neatly, etc. Let them feel the responsibilities of some one thing, and never let there be any excuse but illness for its neglect.

Begin early to teach children to entertain themselves in wholesome and profitable ways, to find in the reading of good books, in study, in congenial and improving occupation, a satisfactory pleasure, and they will be saved many temptations. It is a sad thing when a boy or girl depends always on companions and outside influences for happiness, and cannot spend a leisure hour pleasantly and profitably by themselves. When a child has learned to pleasantly and profitably occupy himself and to find happiness in making himself useful, in giving happiness to others, he has learned a lesson of untold value. Society or

lack of society, sunshine or storm, in city or country, they will have an unfailing source of happiness within themselves.

MAIDA McL.

THE PERSONAL DISCOMFORT, and the worry of a Constant Cough, and the Soreness of Lungs and Throat which usually attend it, are all remedied by Dr. D. Jayne's Expectorant, a safe medicine for Pulmonary disorders and Throat affections.

We used the Frank Siddall's soap according to directions, having a neighbor in to see the same. Can truly say that the soap does all that is claimed for it, and I cheerfully recommend it to all tired housekeepers.

MRS. MAGGIE BERRY.

See offer of free trial package on page 7 of this issue.

NOT FOR GOSSIP.

BY KATE KAUFFMAN.

Let no neighborhood of women complain that they have not opportunities for self-culture. Why, my dear sisters, you need not live in New York in order to belong to Sorosis! Have a Sorosis of your own. Suppose there are seven of you who like to read. Organize. Have a president, a vice-president, a secretary, and a treasurer to take care of the dues. However, do not make membership expensive. With seven members you can have three papers read at each meeting, and the president can always in some way contribute to the interest of the occasion. This will bring each member on duty at every alternate meeting. Let your club meet once a month or fortnightly. If there are only three women who live at convenient distances, let them not be discouraged, but if they have a mutual love for literature and aspire to something above the idle chit-chat of neighborhood gossip, they can form a union which will be the means of mental growth and intellectual self-confidence.

There is in existence a women's literary club which includes just seven—the mystic number. Every formality of parliamentary rule is observed in their meeting. They always rise to their feet in making motions, and preserve the utmost dignity in the most trivial proceeding. They mean business, and care not for the smiles of the casual observer. After they dispose of less interesting matters, they proceed to the literary part of the program, and then any visitor who has been disposed to smile will remain to respectfully admire. Their plan is to have three papers treating in different ways the same subject. One of the papers is a story, one treats of the subject from a historical standpoint, the third may be biographical or critical. These ladies so surprise each other with their ability to write well that they become every meeting warmer friends. They have two officers whom I did not mention; namely, critics. You will readily perceive that there are more offices than members of the club, and, as one wittily remarked, it is an organization where the office seeks the woman.

If the club be so small as to number only three or four, it might meet more frequently and have one paper read at a meeting, after which there should be a conversation, for which all had prepared themselves.

Only a little reflection will prove to any woman the great advantage of a literary club such as we have described. Very many women from country homes spend a few years at boarding-school, and on returning do not continue their habits of study. This is a deplorable mistake. The best antidote to gossip is thoughtful reading, which gives material for kind thoughts and good conversation.

The office of critic is not enviable, but there must be good fellowship, which warrants no undue sensitiveness. You will probably find that ladies sufficiently well educated to write a faultless essay will, in conversation, use slang and other inelegancies. Correct speech, like good manners, is most pleasing when it seems spontaneous. To ensure this, constant practice is essential. An illiterate but original woman once said: "Religion is like an old silver spoon; the more it is used the brighter it gets." The same may be said of every grace and accomplishment. Therefore, bright women, organize a society not for gossip.

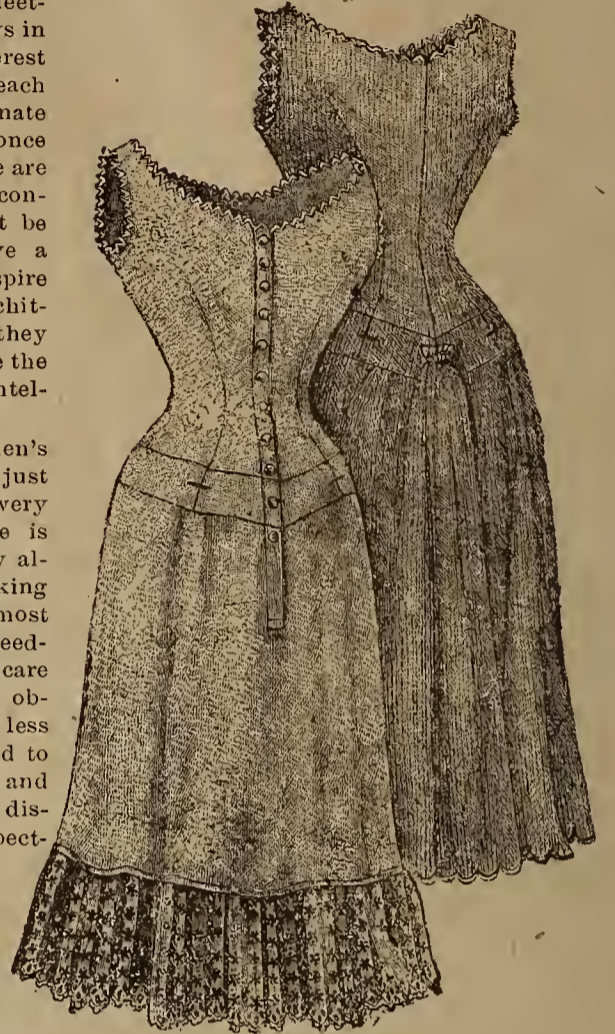
CANNING FRUIT.

We are in the midst of the fruit-canning season once more, and many young wives are trying their luck for the first time, and eagerly scanning books and papers for any help in that line.

First, of course, is to prepare the fruit. Berries are about gone, but remember, next time, if you pick them over, put the required amount of sugar on and let stand over night; they will harden some and will not boil to pieces so badly when cooked. This is true of peaches, pears and quinces as well. Letting the sugar stand on the fruit also extracts its juices, and will generally make enough without adding any water.

Some people use maple syrup instead of sugar to put up fruit with, and it answers the purpose just as well. If one has to buy it, sugar is the cheaper of the two sweets.

While the fruit is cooking, get the cans ready. Select those which are sound; no cracks or nicks allowable. Find a cover which fits down to the shoulder of the can, without the rubber, and it certainly will be tightly sealed when the rubber is placed between. Wring a towel out of water, double and fold around outside the



LOW PETTICOAT BODICE WITH SKIRT OF JERSEY MATERIAL.

can thoroughly, having several thicknesses over the bottom. It is now ready for filling.

The fruit must be put in hot, not warm, and when the can is nearly full, run a silver spoon or fork slowly around between the fruit and glass, to let any air bubbles escape, and the juice down to fill any empty spaces. Shake the can down gently to settle the fruit as much as possible, for when it cools it will shrink some anyway, and a can should be as full as possible to have the fruit keep well. When the can is full to the shoulder, lay over a piece of white paper, tucking the edges in carefully, and fill the rest of the can with juice. The paper prevents the fruit from molding. Place on the rubber and cover and tighten as much as possible. Do not try to tighten again until the can becomes quite cool, or you will be apt to break off the small pin soldered to the cover for the purpose of catching the can-wrench. The heat weakens the solder, of course, and the pins break off much more easily than when cold, and with the pin gone, it is quite difficult to tighten or to open a can. After the cover is tightened the last time, take a small tack-hammer and gently pound down the rim of the cover to the shoulder of the can. The edges of the covers sometimes get bent, and if they are pounded down to fit the can, there certainly cannot very much air draw in to spoil the fruit. Remember you are pounding on glass, and do the hammering very carefully.

Keep canned fruit up-stairs in a dry, cool place, and you will have better success with its keeping nice. A cellar is not very good, for the covers corrode and spoil in a few years, and the fruit is much more liable to mold. I have tried both ways and know by experience.

Peaches, pears, quinces and tomatoes can be nicely kept in tin cans, if they are good ones. Of course, they are cheaper, but the glass Mason jar has the preference.

Pickles, if kept in cans, should be put in those kinds which have glass tops, and those will do to keep in the cellar if there is not room in the fruit-cupboard upstairs.

Watch the fruit carefully after canning. If it will keep two weeks, probably there

will be no more trouble; but at the first indication of its "working" or spoiling, open the can and scald up the contents, and add more sugar. Perhaps the cover or rubber might not have been quite perfect, or they might not have been thoroughly tightened; at any rate, when there is a sign of fermentation about the fruit, nothing will save it but a prompt rescalding. If a can does get the start and is hopelessly gone for sauce, strain the juice into the vinegar.

GYPSY.

CHAT.

Unless you wear the dress-reform garments already, you will never know how comfortable you can be with as few clothes as possible, ridding yourself of the weight and of the extra warmth. In place of the corset, some don the accompanying combined waist and skirt over the union suit. This does away with all the wrinkles about the waist.

It is very pretty made of black silk. I should make the waist of the material doubled, whatever it was, and use a few whalebones if I thought it necessary. It should be made from your own dress-waist pattern.

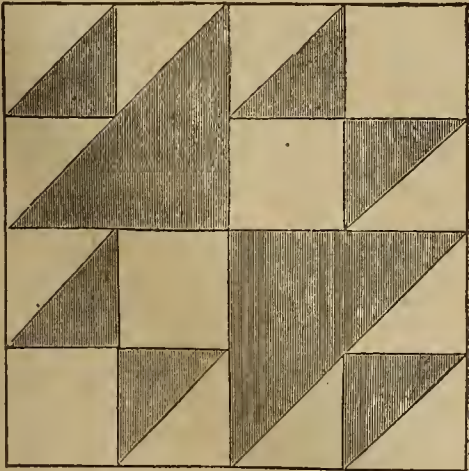
CHILD'S DRESS.—These two suggestions for a little girl can be worked up in any suitable material; a shirred belt is made of the top part of the skirt, and used with either dark or light waists.

QUILTS.—Now is the time to get them out and put them on your beds if you have any packed away. Discard your white spreads entirely. Fortunate are you if you have some of the many-years-ago kind, all stuffed, and quilted beautifully in feather patterns. If you feel like making new ones, select your colors with taste. Make the color in the color blocks all alike. I saw a beautiful nine patch, made of pale blue and white, put together with a large white block. The pieced block was quilted only diagonally, and the white one in a feather wreath. All the furnishings of the room were pale blue, even the carpet and paper.

PORCH PILLOWS.—In some of our large cities you can ride for miles and see the most comfortable, pleasant-looking homes. The houses are all alike, the lawns are a patch of green velvet, the porches adorned with vines and flower-boxes containing bright foliage plants. The porches and steps are covered with a bright red carpet, and against the pillars are large cushions covered with bandana handkerchiefs or Turkey red. It looks like they were all out for a gala day. We can all have that much, it seems, yet many never think of these little attractions to beautify home.

HAMBURG STEAK.—"Oh, Mettie," we exclaim, "do have this kind of a dinner at least once a week. Anyhow, have Hamburg steak." This is beef, chopped fine as for beef loaf, well seasoned, made into small cakes, and cooked like fried chicken, a little gravy served with it, and a little chopped parsley as a garnish.

WATERMELON.—A very pretty way to serve watermelon is to remove the rind from round, thick slices before bringing it on the table. This is a great saving to the table-cloth. It can then be eaten with a spoon, and is much nicer. Some



QUILT PATTERN.

people pile it up thick with sugar; others shake a little salt over it. Both are good, but if it is a real good, cold melon, it is good enough alone.

TOMATOES.—Sliced tomatoes are much improved by being put upon ice. The skin should always be removed when they are sliced; but they should not be scalded if used cold. A ring of onion served with them is very palatable. They are very enjoyable with sugar and cream, leaving off all other condiments.

MENDING.—In mending a jagged tear, it is quite a help to baste a piece of stiff paper under the place, and then darn over the paper.

CHRISTIE IRVING.

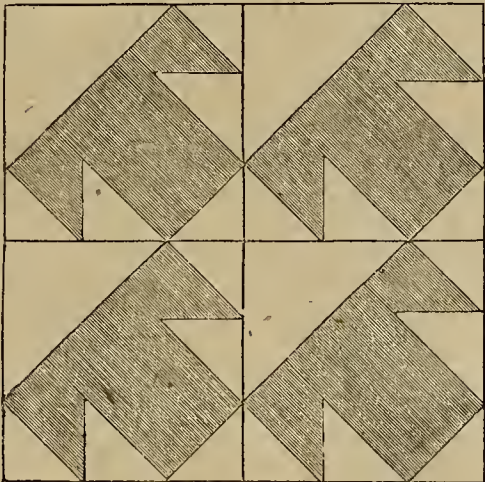
A NEW ART.

There is a chance that the business of the household cook will become one of the fine arts. One woman of refinement and a graduate of the Westminster Cooking-school of London, has adopted it as a profession. She dons cap and apron and goes out to private houses to prepare company breakfasts, luncheons and dinners. She has more engagements offered her than she can possibly fill, and the remuneration is by no means small.

This opens up a large field of industry for women, and it is hoped that the trained nurse has preceded the trained cook but a short time.

I have in my mind a woman of a small town who excelled in making fancy cake, and has adopted it as a profession. Whenever a large or small party is in contemplation she is hired to bake for the occasion, and no amateur will try her luck at baking fancy cake after hiring her.

It has been truly said that there is no profession so understocked as that of the professional cook. Any girl who is worth marrying can make herself an adept in all the charming tricks of the cuisine in a few months, if she finds it necessary. But how many are there of that class? They ought to be the rule, not the exception. A great deal can be said on both sides of the girl question, but the fact remains practically undisputed that all too many of our girls are not receiving the best possible training to fit them to become wives and helpmates for husbands compelled to economize and struggle for a financial footing during their early



QUILT PATTERN.

wedded days. This is the condition in which a vast majority of men find themselves, and the training of women should be governed accordingly, and therefore it is a woman's duty to her daughters to be prepared to meet a world single-handed. They should be taught some method of self-support, even if she should never go out from the shelter of the parental roof, save as the wife and helpmate of a kind and prosperous husband.

MRS. I. GAILLARD.

SUMMER-TIME.

In summer-time, when we have fewer cares than in winter—or if not, acquire the faculty of putting them by for a season—if one has the inclination, one can find time for better care of the face and hands.

For the improvement of the hands, many methods and lotions are given, but it is said that five or six grains of chlorinated lime dissolved in a pint of lukewarm water will whiten the hands more expeditiously than any other application. Redness and warts are also said to be cured by this recipe, if the hands are soaked for ten or fifteen minutes, night and morning. A lemon cut in two and the cut surface applied like soap to the hands has wonderful whitening powers. And the acid of the lemons is highly recommended for removing stains.

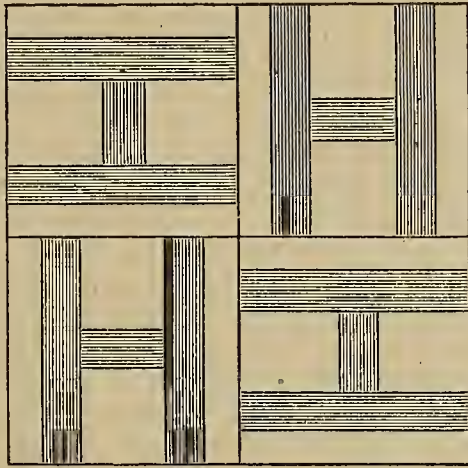
Almond-meal is very nice to use in place of soap, or oatmeal is good to use, if you are staying at home, where you feel privileged to fuss things.

The nails should be brushed every day with nail-brush and soap; then try rubbing them in the palm of the other hand, to polish them. While the hands are still soft from the water, with the towel push gently back the free edge of the scarf-skin, allowing the crescent to show and giving to the nail the desired oval shape.

If your hands perspire too freely, use borax in the water when washing them, and powder them with powdered lycoperdium, rubbing it in well. By giving them attention each day, in a month's time the red and rough hands can be made white and soft.

For excessive perspiration under the arms, hot, strong salt water is recommended.

For redness of the face after walking or riding in the wind, lie down and apply



QUILT PATTERN.

flannel cloths wrung out of hot water for half an hour, then gently powder with fine infant's powder, which is said to be powdered rice and corn-starch.

The fad of the moment for the proper young damsel is the use of perfumed baths. Any one can enjoy this luxury—which is a very cheap one, by the way—by making their own bath sachet-bags. A mixture of almond-meal (or oatmeal), shavings of white castile soap and powdered orris-root is put into cheese-cloth bags six inches square. The bags are closely stitched by machine, and are used in the bath in place of sponge or wash-cloth. So, when your Dulcinea emerges from her afternoon seclusion and walks in the shade of the trees, she not only looks cool and dainty, but her skin, like a baby's, is soft and faintly sweet.

S. AMELIA R.

DISHES FOR THE COUNTRY HOUSEKEEPER.

As poultry is the ever-ready resource of the country housekeeper, it is well to know how to prepare various dishes from it, rendering it more acceptable. The following recipes will therefore be found useful:

PILAFF OF CHICKEN.—Clean and cut in pieces a full-grown chicken. Put in a stew-pan, half cover it with boiling water and set on the stove to simmer. Wash half a cupful of rice, add to the chicken, season with salt, and simmer until the chicken is tender. Take up, pour tomato sauce over.

BRUNSWICK STEW.—Cut up a full-grown chicken. Put in a large saucepan with boiling water, one sliced onion, half a pound of lean ham cut in small pieces. Cover with a close top and simmer gently for one hour and a half. Add a little salt, a quart of tomatoes, three sliced potatoes, a pint of beans, a tablespoonful of chopped parsley, with cayenne and black pepper. Let simmer one hour longer. Rub two tablespoonfuls of butter and one of flour together and add. Stir five minutes and serve.

CHICKEN A LA TARTARE.—Take a spring chicken, split down the back; place in a baking-pan, spread with bits of butter, sprinkle with salt and pepper, a little chopped parsley and onion. Cover the pan, set in a quick oven for an hour. Take from the pan, brush over with beaten egg, strew with grated bread crumbs, and broil over the fire until brown. Serve with sauce Tartare.

CHICKEN CROQUETTES.—Take a well-grown chicken and put to cook in boiling water; add one small onion, half a dozen cloves and a sprig of parsley. Let cook until very tender. Take up, remove the bones, chop the meat very fine with a little cold boiled ham; to every pint allow half a pint of milk, a tablespoonful of butter and two of flour mixed, and boil until thick; when take up, season with a tablespoonful of chopped parsley, a slice of onion finely minced, half a grated nutmeg and a pinch of cayenne. Turn in a flat dish to cool; when cool, form in croquettes, dip first in beaten egg and then in grated bread crumbs and fry in boiling lard.

CHICKEN SOUFFLE.—Put a tablespoonful of butter in a saucepan; let melt, add

a tablespoonful of flour and mix smooth, add a pint of milk, stir in half a teacupful of stale bread crumbs. Let cook one minute; take from the fire, add a pint of cold, finely-chopped chicken, salt, pepper, chopped parsley and the beaten yolks of three eggs; beat the whites and stir in carefully. Pour in a greased pan and bake twenty minutes. Serve immediately.

CHICKEN A LA MARENGO.—Clean and cut up two young chickens. Put a tablespoonful of olive-oil in a frying-pan and set over the fire; when hot, put in the chicken and cook until brown, add a sprig of parsley, a slice of onion, with a little salt and pepper; stand over a moderate fire and cook slowly until done. Serve with cream sauce.

CHICKEN CUTLETS.—Take a young, tender chicken, cut the skin and draw it entirely off the breast. Take off the wings at the joint, run a knife along the breast-bone, remove one half the breast in a solid piece with the first joint of the wing, thus making the cutlet; remove the other side in the same way. The dark meat and pieces left will make other dishes. Put the dark meat in a saucepan and cover with boiling water; add an onion, four cloves and a sprig of parsley; lay the cutlets on top, cover and let simmer until tender. When done, take up, dust with pepper and salt and baste with melted butter. Stand aside until cold; dip in egg, then in bread crumbs and fry in boiling lard.

ELIZA R. PARKER.

AN EVERY-DAY TALK.

MARY D. SIBLEY.

I have come up to my room to rest. The windows are wide open, and I can look across the meadow and see the green corn beyond, stirred by the same breeze that steals into my window, so pure and fresh and sweet; beyond the corn is the ripened wheat bordered by the woods. How restful it is, and how good it is to live. No hot streets and crowded air; no great stone buildings reflecting the glare of the sun into your very face; no dust, no crowd, but instead, are the clover blossoms and the sweet quiet. Then, too, is the delightful air so good and wholesome. Surely this is God's bountiful gift to his children who toil.

Our city friends may listen to some singer whose sweet voice does not break upon our isolation, but the robin and the bluebird are here, and out in the walnut-trees the squirrels are chattering. To-day a stone was shied at one as he clambered up a tree, thinking, no doubt, that his great bushy tail, curling so cunningly over his back, shielded him. "Stop, boy," and a gentle hand was laid upon the eager urchin's, whose black face shone with excitement. "You musn't stone my squirrels. I love them and take good care of them." In the man who loves his squirrels, the robins have a friend and feel secure to build their nests upon his porches; the horses come at his call, and every dumb creature on the farm has his protection.

"Isn't this a glorious day?" calls up some one from the shade of the trees below.

"Yes, but to-morrow you'll have to drag yourself up and down those monotonous corn rows; you'll come home tired and dull from your weary work. I must cook for hungry men, wash dishes, sweep, dust, bake and mend, with scarcely a moment to watch that bit of blue sky and ever-varying clouds."

And so it is all over the world. No one has all joy, no one all sorrow; no one has all ease, no one all hardship. We country people play no exceptional part. We, too, have the bitter and the sweet, but let us believe that we have more of the sweetness than bitterness. If there is a bitterness, its cause is largely from within, for without there is a glad beauty surrounding us, and the world is his who enjoys it. Then live and rejoice that you do live. Steal away from the work for a day. See new faces and new scenes and have something pleasant to think of as you work. I have but little sympathy for the woman who is a mere grind, who makes no effort to bring a little pleasure into her work.

I'm going to tell you of a bit of enjoyment that I carried home with me from a trip last summer. I have enjoyed it over and over, myself, and often tell it to my friends.

On a prominent street in a large city is a large boulder carved into a trough which is constantly fed with water. On one side is carved,

"IN MEMORY OF DOLLY."

A lady whose carriage horse died placed it there. Daily, hundreds of horses quench their thirst at Dolly's monument. I think it was a beautiful deed, don't you?

Our Sunday Afternoon.

THE MESSENGER.

In dark days of grief and pain,
When I hoped that dawn again
Nevermore would greet my eyes
With its sudden, sweet surprise,
Came an angel fluttering down,
Sought me in the lonely town,
Saying, "Sing, oh, heart forlorn,
And thy music may be borne
And be blent in coming years
With the music of the spheres.
Soft and low the songs thou'lt sing,
Minor chords, low murmuring,
Lost, perhaps, to all but thee
In the world's grand melody,
Though no other ear than thine
To its piping should incline,
Poor heart, all the live-long day
It shall drive thy pain away;
And when tear-drops else would fall,
Thou shalt hear its tender call.
Sing, then, softly, heart forlorn,
And thy music may be borne
And be blent in coming years
With the music of the spheres."
Then the angel did depart,
Leaving music in my heart.

THE FAMILY SABBATH.

It was Sunday afternoon in a foreign city. Holiday crowds were surging through the streets and overflowing into the suburbs. Everywhere was a hubbub of talk and laughter; in every square music piping and carousels spinning; in every garden was feasting and merry-making. We were sitting at coffee in the house of a revered pastor, and the pastor's son was discoursing to us of the advantage of having the best plays and operas reserved for Sunday evenings.

"And how do you in America spend Sunday?" he asked.

"Mornings we go to church."

"Yes, of course."

"Afternoons we read, sing, talk together; when we are in the country, we take a quiet walk."

"Yes," somewhat dubiously.

"Evenings we go to church, or enjoy one another at home."

"Ah, du lieber Gott! What a dull life!"

We could only let the subject drop in silence. But like a breath from the garden of the Lord stealing into a sultry, arid place had come the memory of our childhood's Sabbath.

The sunbeams that waked us in the morning wrote over our little bed in letters of serene gold, "Holy Day." Our mother came to us with a hymn upon her lips, and the family met together with every home love burning its purest. The walk to church was through a hushed and shining land we never saw of a week-day, and we sang with the great congregation from the depths of happy hearts,

"Oh day of rest and gladness!"

All day long, the tasks and diversions of other days laid by, we could yield ourselves at will to the dreams, the fancies, the deep, dim, divine thoughts that made the heaven of childhood, before life had laid a sobering hand upon us and called our reveries idle. Night came and the Sabbath stars shining so much more holly than other stars, all the sweet influences of the day grouped themselves about our drowsy head, and our last thought was a prayer that they might go with us down the merry week.

Blessed he who has such memories, to whom the Sabbath was never a day of revelry on the one hand, nor of gloom or dullness on the other, but in truth

"The world's sweet inn from care and wearisome turmoil."

That is profound philosophy which counsels parents to make Sunday the happiest day of the week. And the chief requisite to this is that they give themselves to their children, at church as well as at home. The Sunday-school must not be allowed to usurp the place of the church service. The child nestled in the family pew at his mother's side, holding his father's hand, enters naturally from the shelter of warm human love into the mystery of divine love, and the house of God very early becomes to him the gate of heaven.

For little children it is a pretty plan to set aside for Sabbath use the most attractive toys, the favorite pictures and stories, the sweetest child songs and hymns, and to join with them more than ever in their plays and their quiet moods, until, when

they wake Sunday morning, they shall exclaim, with a four-year-old of our acquaintance, "Oh, I'm so glad it's Sunday!"

Music is the heritage of the family Sabbath. Not church hymns and Sunday-school hymns only, but the music of the masters as well, those great compositions that tell without words the story of human life, and tell it religiously because truly and profoundly; that speak to the children as plainly as to the elders; that open heart to heart, and intensify in each his own living and longing.

Books belong to family Sabbath. Not that thief of Sabbath hours, the Sunday-school library book, not sickly nor precocious story-papers, nor sordid secular papers, nor scrappy religious ones; but real books, and all the real books, poetry as well as books of devotion, essays and biographies, and every other kind of book that sets the heart throbbing with a wish to be something greater and better than we ever have been before. And often some one will read aloud, while the chairs draw together, the reader pausing all the way along for the children's questions and the commentary of the parents, and for reminiscences and hopes ahead.

It is fortunate when nature can enter into the family Sabbath. To jostle with Sunday crowds on ear and boat is to forfeit, we must think, our heritage of a holy day. But the sojourner in rural haunts sees nature on the Sabbath as he cannot of a week-day. During the week we are sadly apt, whatever our creed, to roam the fields mere materialists. But the Sabbath kindles into flame the spark of divinity within us.

Then, as the family walk abroad, the father assumes his most ancient, most sacred office of high priest of his household. Then all become psalmists, all prophets. The harvest waves the promise of better things than loaves for the table. The solemn mountains, the deep skies, are more than backgrounds for landscapes, show-places for rainbows; for underneath the voices of winds and waters they hear the earth spirit in her most secret utterance:

"Tis thus at the roaring loom of time I ply,
And weave for God the garment thou seest
him by."

They who so walk the earth together shall not be separated in heavenly places.
F. W. S.

BE PROMPT.

You have probably heard about the person who was said to have three hands—a right hand, a left hand, and a "little behind hand." That third hand was nothing but a trouble to him, and he ought to have "cut it off," as the Bible directs.

Perhaps some of our readers have such a hand; if so, it would be well to cast it away. A "little behind hand" means that the person is not prompt in doing work when it ought to be done, or in being on time at an appointment. He is always a little late in his movements.

It is not best to put off any work or business beyond the time in which it should be done. We have seen children put off going to school until the last minute, and then how they would run to get there on time! All out of breath, they would rush in just as the door was closing, in a very unfit condition to take any part in the exercises. We have seen men who had business in the city every day, wait until the last minute, and then how they would run for the cars, being just in time to jump on board as the train was moving out.

Promptness in every duty, and a regard for time, is the best way to deal with our every-day life. Boys and girls should be prompt in their service, not putting things off until the last minute, for the last minute often means some time after the matter should be attended to.

If a lesson is to be learned, learn it on time; if a chore is to be done, be on time in doing it. Don't be slack, and say that "by and by" is just as well. Be prompt in every duty as far as you can be, and then the Lord's blessing will attend you.

Be prompt in both praying and working, for the two should go together. The Lord is prompt in his work; it was "in due time" that Jesus died for sinners, and at "the appointed time" he will come again to the earth to set up his everlasting kingdom.

To be ready for the coming of Christ is

to be prompt in duty; to leave nothing undone beyond the time in which it should be done. "There is a time for every work," said Solomon, and especially a time for every good work, and those who are prompt in the service of the Lord are the ones who will be ready for his coming.

FEAR.

Fear is good. The fear of the Lord is clean, and it tends to cleansing of heart and life. Fear God and keep his commandments. Fear to break his commandments. Pass the time of your sojourning here in fear. Work out your own salvation in fear and trembling. Work and fear, as though salvation depended on your own efforts, knowing all the while that it is all God's working.

It is too much the fashion to slight fear, to undervalue it. "Perfect love," say they, "casteth out fear." Aye, so it does. Show me where on earth love is perfect, and there, undoubtedly, fear may be safely cast out; but until that which is perfect has come, the fear of the Lord will be needful to protect the love and keep it pure.

In this world, they that fear not God cannot please him. That which they call "love" is a sham. It admits of their pleasing themselves in direct opposition to the inculcations of the Son of God; allows them to go on in such a life, undisturbed by conscience; to set up their own notions of what is acceptable service and worship, even though clearly forbidden by the word of God, and frequently soothes them into the notion that they are exceptionally devout and devoted. Let the winds of fear blow upon their self-deceptions, and they, perhaps, will be able to see that love to God studies to learn what is his expressed will, and sets the heart earnestly to do it.

Ways of man's devising may seem to be better, more useful, more effective; they frequently have an appearance of great sanctity and Godliness, but all "will worship" is open to this condemnation: It never was required, and we cannot know that any of it is accepted, and we do know surely that where it is forbidden in the New Testament it is rejected and condemned. "Fear God," and seeking out no new ways, no strange laws and customs, "keep his commandments!"—*Christian Guardian*.

CHEAP ENOUGH.

"The cost of the maintenance of religion in the United States is estimated at one half a cent per annum for each individual," said the Rev. Stephen Dekins, in the Fourth Street Methodist Protestant church, Brooklyn, a few Sabbaths ago. The last census shows that while 33,163 lawyers receive \$35,000,000 every year in fees, 37,000 ministers get only \$6,000,000. Mr. Dekins also said \$50,000,000 was spent to support the dogs of the country. Only think of it, \$50,000,000 for dogs and \$6,000,000 for the clergy, and yet people complain of the expenses of religion.—*New York Sun*.

Pleasant, profitable employment is offered every energetic person in introducing our world-famous picture, "Columbus at the Royal Court of Spain," in their neighborhood. See our grand offer on page 15 and write us for full particulars.

FOR SUMMER COMPLAINTS
PERRY DAVIS' PAIN-KILLER
BEST MEDICINE IN THE WORLD.

CONSUMPTION

(except last stages), CATARRH, BRONCHITIS, ASTHMA, and all Diseases of the Lungs, surely cured by the New Andral-Broca Discovery. Not a Drug, but a New Scientific Method of Home Treatment. Cures Guaranteed. Sent FREE to all who apply. Try it FREE, and pay if satisfied. State age and disease in full. Address NEW MEDICAL ADVANCE, 62 E. 4th St., Cincinnati, O.

You need work.

(If not this adv. does not interest you)

You can make \$75 to \$250 a month, provided you work with a little vim, vigor, pluck and push.

We have got something new. It costs nothing to investigate. Must have a live, wide-awake representative in your community, either man or woman at once. All information cheerfully sent by return mail. Better write to-day. Address in full,

THE STANDARD SILVERWARE CO.,
ORDER DEPT. 501 BOSTON, MASS.

If afflicted with sore eyes use Dr. Thompson's Eye-Water

Kennedy's Medical Discovery

Takes hold in this order:

**Bowels,
Liver,
Kidneys,
Inside Skin,
Outside Skin,**

Driving everything before it that ought to be out.

You know whether you need it or not.

Sold by every druggist, and manufactured by
DONALD KENNEDY,
ROXBURY, MASS.



For Harness, Buggy Tops, Saddles, Fly Nets, Traveling Bags, Military Equipments, Etc. Gives a beautiful finish which will not peel or crack off, smut or crock by handling. Not a varnish. Used by the U. S. Army and is the standard among manufacturers and owners of fine harness in every quarter of the globe.

SOLD BY ALL HARNESS MAKERS.
Mention this paper when you write.

House Furnishing

has many branches. We concentrate our entire resources on wall papering. Pretty effects—new designs. 100 samples mailed for 8 cents. Prices, 5 to 50c. a roll.
A. L. DIAMANT & CO., 1206 Market St., Phila.
Mention this paper.

Asthma The African Kola Plant, discovered in Congo, West Africa, is Nature's Sure Cure for Asthma. Cure Guaranteed or No Pay. Export Office, 1164 Broadway, New York. For Large Trial Case, FREE by Mail, address KOLA IMPORTING CO., 132 Vine St., Cincinnati, Ohio. Mention this paper when you write.

PRINTING OUTFIT 15¢ COMPLETE, 4 alphabets rubber type, typeholder, bottle of ink, ink pad and tweezers. Put up in neat box with directions for use. Satisfaction guaranteed. Worth 50c. Best Line Marker, Card Printer, etc. Sets names in 1 minute, prints 500 cards an hour. Sent postpaid 15c. for 25c. Cash. R. H. INGERSOLL & BRO. 65 Cortland St., N. Y. City. Mention this paper.

A BIG OFFER 50c. MADE IN A MINUTE! If you will hang up in the P. O., or some public place, the two show bills that we send, we will give you a 50c. cert., and send it in advance with samples and bills. This will trouble you about one minute, and then if you want to work on salary at \$50 or \$100 per month, let us know. We pay in advance. GIANT OXIE CO., 21 Willow St., Augusta, Me. Mention this paper when you write.

SYLPH CYCLES RUN EASY Vibration overcome without complication, loss of power or ungainly features. Highest grade in material, construction and finish. All users delighted. Investigate. Agents wanted. Catalogue free. HOUSE-DURIEA CYCLE CO. 32 E. St., Peoria, Ill. Mention this paper when you write.

LOOK HERE. Do you use lamps? Our patent attachment improves the light, avoids dirty work in filling, saves time and money. You need it. All housekeepers need it. Samples free; and Gold Watch premium to first each week. Write at once. Agents wanted. Good pay, steady work. 3 months subscription to Monthly Journal for 2c. stamp. J. Bride & Co., Nassau St., New York, N. Y. Mention this paper when you write.

FREE. Our large 24-page Catalogue, profusely illustrated, full of information on the proper construction of Pianos and Organs. We ship on test trial, ask no cash in advance, sell on instalments, give greater value for the money than any other manufacturer. Send for this book at once to BEETHOVEN ORGAN CO., WASHINGTON, N. J. P. O. Box 628.

TOKOLOGY, a complete Ladies' Guide in health and disease, has become a household word in thousands of families. Mrs. N. R. McC. writes: "Dear Dr. Stockham:—I cannot tell you how much TOKOLOGY has done for me. Our son came almost without warning. I most heartily rejoice when I hear of a 'Tokology Baby.' Prepaid \$2.75. Sample pages free. Best terms to agents. ALICE B. STOCKHAM & Co., 277 Madison St., Chicago.

Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

SUMMER FOOD.

If the hens must be fed on anything at all it should be on lean meat. It is better to feed nothing, and let the hens pick up all they can from the range, which gives them a variety and keeps them in exercise, but when the hens do not lay, a mess of cooked lean meat, once a day, will often start them to laying when everything else fails. Hens will not lay after they begin to moult, but as long as they are not moulting they should be laying, as there is no season of the year so favorable to egg production as the summer.

When the hens are not laying during summer, there is something wrong. It may be that they are too fat, or that lice are annoying them. It may happen that even on the range there is not a sufficiency, but it is seldom that such is the case. The majority of those who feed their hens give nothing but grain, and in so doing they soon get the hens out of the favorable condition for laying by making them too fat.

The best summer foods are meat, milk and grass. The hens can secure all the green food they wish if they are at large, and also seeds and insects, but if supplied with skim-milk they will need no other food as long as they are laying; but should the supply of eggs fall off, give lean meat. Cut off every portion of the fat from the meat, and use only that which is lean. A pound of meat will be sufficient for sixteen hens, or an ounce for each hen. When the hens cease laying it would be well to first examine for lice, as that is where most of the difficulties begin, for when the hens are kept clear of lice they will usually give good results of themselves.

FILTH AND DISEASE.

Keep the poultry-house always clear of filth, and there will be less liability of disease. Clear away the droppings as fast as they accumulate, and scatter dry dirt on the floor of the poultry-house. A few pounds of land-plaster over the dirt will also be an advantage. When the filth is removed it may be added to the manure heap, as it will be more serviceable in the heap than when kept in barrels. A house that is free from odor, and kept clean, will be inviting to the fowls. It is lice and filth that sometimes compel the hens to resort to the trees instead of going on the roosts.

LAMENESS OF YOUNG POULTRY.

When young turkeys must fly up or down, owing to high roosts, they will become lame. Their bones are flexible, and cannot endure the daily heavy jarring.



FIGURE 2.

They should be kept under a shed, with a low roost, until well grown. Chicks become lame when kept on damp ground, or when fed too highly on very stimulating food, as they grow too rapidly in body in proportion to strength of the legs.

GET PURE BREEDS.

It is in late summer and fall that pure-bred fowls can be bought for a small sum. The breeders are now overstocked with birds, and are anxious to reduce them. They usually retain the young stock until fully matured, so as to select their prize-winning males and females. When this is done the surplus is sold. This surplus may really be the best of the flocks, as breeders select more for a few useless points than for vigor or utility, and those who buy now will be able to get better stock than by waiting until spring. It is not easy to procure hens or pullets of the pure breeds in the spring without paying a greater sum than many are willing to

give, but at this season prices are within the reach of all. If pullets are not desired, the object should be to secure a male or two, in order to grade up the common flocks. If this is done, the improvement will be so satisfactory as to impress the importance of the use of pure breeds entirely.

A DOUBLE HOUSE.

The advantages of the double house, which we present in this issue, are the southern exposure in the back pens as well as in the front ones, while the walls being in the center makes the work much easier. The slanting front allows the sun's rays to strike inside the house easily, and the plan permits of a large floor space in proportion to lumber used in the construction.

The house is 13 feet wide on the lower portion (K), with a passageway of 3

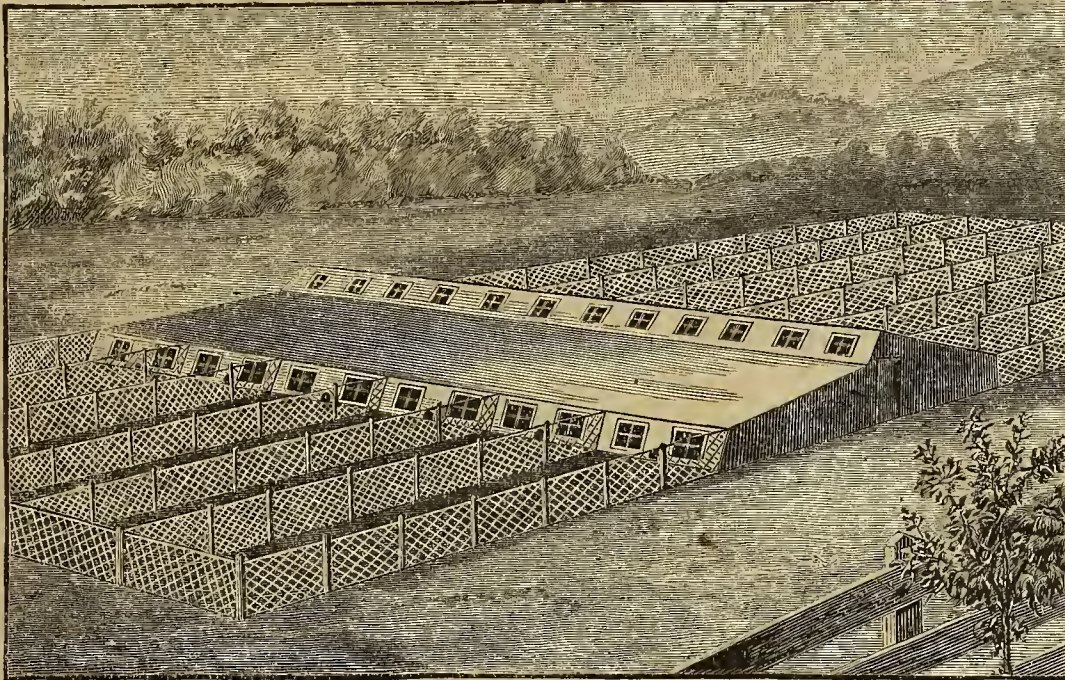


FIGURE 1.

feet, the higher portion (H) being 11 feet wide, the passageway being opposite the door. The portion marked K is 3 feet in front and 18 feet on the roof, being 5 feet high where it meets the door. The higher portion (H) is 12 feet on the roof to the passageway, and 3 feet at the rear. The yards are 10 feet wide, and may be of any preferred length. The apartments in the house are 10 feet wide each.

In Fig. 2, the interior arrangement is shown, A A being nest-boxes, B B the roosts and C C the feed and water troughs, which open into the passageway. The design is by E. F. Hodgson, Delaware.

BONE-MEAL.

The common bone-meal, which is sold at about three cents per pound, is excellent, and it is so cheap that it will pay to keep it before the hens all the time. It serves as grit, as it is hard, and it provides lime for the shells, as well as provides a portion of the nitrogen. That which has an ammoniacal odor is not suitable, for the hens will not readily eat it, but there is a commercial article intended especially for poultry, and which is sold at nearly

sawdust or a pail to receive the blood. Hold the head with the left hand, open the beak, and with a sharp knife sever the arteries and vertebrae near the base of the brain. All the work should be done rapidly, and as soon as the first convulsive struggle is over pluck the quill feathers, so as to do so while the body is warm. Then carefully pick off all the small feathers, and especially the pin feathers. Throw the carcass in ice-water, and allow it to so remain for twelve hours. Nothing is removed but the feathers.

In some markets the fowls must be drawn, the entrails and the crop being removed (after first cutting off the head), and the skin drawn over the neck and tied. The wings should be folded across the back, and the carcass made to have a clean appearance.

Pack in clean boxes, and have uniform

sizes and appearance of the carcasses, by assorting them. The best prices are paid more for appearance than for quality, and two or three cents a pound on a box of fowls amounts to a large sum, compared with the small extra labor required to make the birds reach the market in a condition to satisfy the customers.

THE SLEEPY DISEASE.

Some of our readers write us that their chicks are afflicted with a disease in which the chicks do nothing but sleep, and remain in this condition until they die. It is simply due to the effects of the large, gray lice on the heads and necks. Such lice are never seen, as they do their work silently. By rubbing a few drops of sweet-oil on the heads the lice will be destroyed. It is best to anticipate the difficulty, and rub a few drops on the hens as well as the chicks, once a week, and the trouble will be avoided.

BROOM-CORN AND SORGHUM SEED.

The seeds of broom-corn, sorghum and such like make the very best food for poultry, because they are small and can be scattered in a manner to induce the hens to scratch and work. They also serve to provide a change, or variety, and in those sections where land is not valuable for some other crop, the crops named should be grown for poultry food. Sunflower seeds are also excellent, and we may include pop-corn. We do not suggest that they be grown as main crops, for that depends upon many circumstances, but at least a patch should be grown in order to give the birds a variety in winter.

PIGEONS AND DISEASE.

It has been demonstrated that the pigeon is subject to all the diseases that affect fowls, and are also the distributors of disease, as they fly from one yard to another, and carry lice as well as disease. It should be the rule in each community for those who keep pigeons to confine them. Any person has the right to keep pigeons, but he has no right to turn them loose to secure food on other farms, and to render all poultry-yards liable to vermin and disease.

HANDLING LOUSY HENS.

The best way to treat a hen that is very lousy, is to dust her well with fine ashes. Sift coal ashes, and then sift again, with a flour-sieve, as the ashes must be very fine. In each peck of ashes mix half a pound of insect-powder. Hold the hen over the ashes, head down, and throw the ashes in among the feathers by the handful, using the ashes freely, rub a few drops of lard on the head and turn her loose. The lice will be destroyed at one operation.

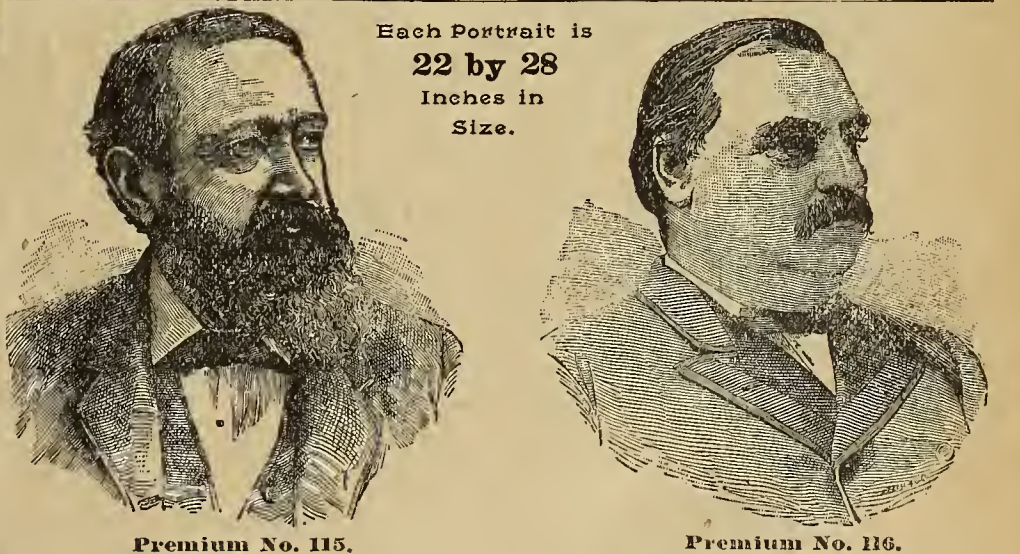
A CHICKEN-COOP.

For little chicks, make a run of lath, which can easily be four feet square, with a soap-box for shelter, and the chicks will have plenty of room, as well as be safe from the cats and hawks. Move this run to a new piece of ground every day, so as to give the chicks a fresh scratching-place, and keep them in the run until they are quite large. They will thrive well, and but few of them will be lost.

THE MANURE HEAP.

Let the hens scratch in the manure heap to their full content. They will not only find many little dainties, but will keep themselves busy from morning until night, and they will also rake the manure fine, thus improving it, as well as picking out a large number of seeds that should be removed with advantage. The more a hen scratches the better her condition for producing eggs.

Any of our readers who may be out of employment should read page 15.



Premium No. 115.

Premium No. 116.

Magnificent Lithographic Portraits of
Pres. Benj. Harrison and Ex-Pres. Grover Cleveland.

Republican and Democratic Presidential Candidates.

These portraits are large and handsome, 22 inches by 28 inches in size and perfect likenesses, worthy of a place in any American home. A world-wide interest is centered upon these two eminent American citizens, who represent the two great political parties of the day, and we offer you an unequalled opportunity for securing an authentic

PORTRAIT OF YOUR FAVORITE, FREE.

Upon receipt of 50 cents for one year's subscription to either Farm and Fireside or Ladies Home Companion, and 5 cents extra for postage and packing, we will mail free one of these handsome portraits to any address.

Or, one will be mailed free to any person sending only one new subscriber to either paper. Give the premium number of your choice. We will make specially low prices to political clubs or parties ordering in quantities for campaign purposes.

Address FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Queries desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Removing Stumps.—C. H. B., Mission City, B. C. See article on grubbing and clearing in FARM AND FIRESIDE of June 1, 1892.

Cheap Paint.—E. F., Carey, O. Hydrantic cement, or water-lime, mixed with skim-milk, makes a cheap and durable paint for outdoor work.

Old Coins.—J. D. B., Moore, Ind. For information about the value of old coins, write to the editor of the *Coin Collectors Herald*, Boston, Mass.

Tobacco Culture.—O. B. D., Mansfield, La. Write to the secretary of agriculture, Washington, D. C., and ask for special bulletin on tobacco culture.

English Sparrows.—I. H. K., Springfield, Ohio, writes: "As a means of ridding the country of English sparrows, so destructive to grain, I would suggest the legalizing of the use of 'bird-lime,' for this special purpose. It is now a violation of law to use it for catching birds. If used, it would undoubtedly catch many singing and harmless birds, but these could be liberated without injury. By covering ropes with the lime and suspending them from posts or stakes, I think the scheme would be successful, and as there is a bounty, it might be remunerative."

Remedy for Ivy Poison.—C. D., Jackson, O. The following is highly recommended: The poison is a "volatile acid" and is best treated by an immediate washing of all the parts affected with some alkali, sufficiently diluted not to irritate. Ammonia, cooking soda, or even soft soap (in which there is generally an excess of alkali) will sometimes prevent any serious trouble if used freely as soon as there has been exposure to the vine. After the poison has begun, its inflaming work the alkali will do less good. Then applications should be frequently used tending to control or shorten the inflammatory process, such as a solution of acetate of lead or sulphate of copper. In the intervals between the application of these washes, the parts may be kept covered with cold-water dressings or powdered starch. A mercurial wash (black wash) is sometimes used, and also an ointment (diachylon), made largely of lead, but these are too dangerous to be used except under intelligent care. Some find relief from a use of sweet-oil.

Sewer-pipe for Wells.—J. H. W., writes: "Is sewer-pipe made of clay, same as crockery ware? How are the joints fastened together? Would sewer-pipe of about two and a half feet diameter be good for walling a well one hundred and thirty-five feet deep, where there is some running sand? Is it easily broken, and would it be expensive for such walling? About how long would it last when once placed? What point nearest to western Kansas is it extensively manufactured?"

REPLY:—Sewer-pipe is made of clay, and burned hard, or vitrified. It can be made water-tight by closing the joints with Portland cement. It can be used for walling wells, and makes a wall practically indestructible. It can be broken easily by rough handling, but once in position it will last forever. A special kind of sewer-pipe without flanges is made for walling wells, but we do not know where it is manufactured. Probably the editor of the *Drainage Journal*, Indianapolis, Ind., can tell you where you can most conveniently obtain what you want.

SUGGESTION FOR A SUMMER TRIP.

If you wish to take the trip of a lifetime, purchase the low rate excursion tickets sold by all principal lines in the United States and Canada via the Northern Pacific Railroad to Yellowstone National Park, Pacific coast and Alaska.

The trip is made with the highest degree of comfort in the elegant vestibuled trains of the Northern Pacific Railroad, which carry dining cars and luxurious Pullman sleeping cars from Chicago, St. Paul and Minneapolis to Montana and the Pacific coast, without change, and special Pullman sleepers from St. Paul and Minneapolis to Yellowstone Park.

The scenery en route is the most magnificent to be found in the seven states through which the road passes. Beautiful mountains, rivers, valleys, lakes and plains follow each other in rapid succession to delight the tourist, who will also find interest in the agricultural, mining, lumbering, industrial and other interests associated with the development of the great Northwest.

The crowning glory of the trip through the Northwest, however, is the visit to Yellowstone Park, the land of hot springs, geysers and gorgeous canons, and to Alaska with its endless ocean channels, snow-capped peaks, Indian villages and giant glaciers.

If you wish to investigate this suggestion further send to Charles S. Fee, General Passenger Agent, N. P. R. R., St. Paul, Minn., for copies of the handsomely illustrated "Wonderland" book, Yellowstone Park and Alaska folders.

Fine savings from soft pine wood make a pleasant pillow. They have special curative virtues for coughs and lung troubles.—*Good Housekeeping*.

VETERINARY.

Conducted by Dr. H. J. Detmers.
Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. Detmers, 33 King Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column, must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances.

PROTECTIVE INOCULATION.

Quite a large number of inquiries in regard to my protective inoculation against swine-plague, or so-called hog-cholera, as published in FARM AND FIRESIDE of July 1st, have recently been received. In the following I will try to answer all of them, and under the following headings:

1. I published the whole modus operandi because I think every discovery by which great losses are averted, but especially every discovery by which disease of man or beast may be prevented, should as soon as possible be made public property, and should not be used or kept secret for mercenary purposes, or to make a fortune out of it. Hence, no territory will be parceled out, and no agents will be appointed. What I published will be sufficient to enable any experienced bacteriologist to prepare the inoculation lymph or virus.

2. I cannot prepare the lymph or virus except in limited quantities, because I have other duties to perform, and to prepare the virus in large quantities to satisfy the demand would require my whole time.

3. The limited quantities I shall be able to prepare will be on sale at H. Braun, Sons & Co., 24 North High street, Columbus, Ohio. This firm has been selected by me because it is known to be strictly reliable in every respect. What the price for a given quantity will have to be, I am not yet able to state, because I do not yet know what the flasks or vials of a peculiar construction, which are needed to keep the virus pure and to protect it against any contamination and deterioration while transported, will cost. There seems to be some difficulty in obtaining them. Several glass factories have been applied to, but a satisfactory answer has not yet been received, and it is possible that the flasks will have to be imported from some factory abroad, in which special orders are more willingly executed.

4. To accommodate several applicants, I have concluded to offer to a limited number of intelligent persons of good reputation (none others need apply) a private course of instruction in the preparation and application of the virus. This course I shall be able to open about the 22d of August, and will be closed about the 10th of September. My terms, which will somewhat depend upon the number of students entering the course, can be learned on application. The accommodations in my laboratory are limited to about half a dozen of students. At a successful completion of this course a certificate setting forth the competency of the holder will be given.

5. The syringes used must be so constructed as to make it possible to disinfect them in an easy and thorough manner every time they have been used. The syringe invented by Dr. Koch best answers these requirements. The price can be ascertained of H. Braun, Sons & Co., above mentioned.

6. To those who inquire for certificates of the efficiency of my method, so that the farmers may gain confidence, I have to say I despise, and do not deal in such commodities. In my article in FARM AND FIRESIDE I have stated the honest, scientific truth, and any one who does not believe what I said without certificates from laymen may do the other thing. He is at perfect liberty to do so, as far as I am concerned. Certificates, as a rule, are easily obtained, don't amount to anything, and invariably have a smack of quackery.

7. All other questions asked have been answered beforehand in FARM AND FIRESIDE of July 1st, as the inquirers will find themselves, if they only will take the trouble to read that article a little more carefully.

Foot-rot.—M. C. N., Portersville, Ohio. Your sheep are affected with foot-rot.

Salt-eating Mule.—C. M. F., Confidence, W. Va. If your mule is a glutton for salt, don't give him any more than he needs. Salt in too large doses is very injurious.

Blind.—O. M., Prattville, N. Y., writes: "We have a mare twenty-six years old. She is good and strong. She has been getting blind for the past two years, and is now almost entirely blind. We can see nothing that would cause blindness."

ANSWER:—The blindness of your mare is probably due to old age, and, therefore, incurable.

Enlarged Submaxillary Glands.—S. M. A., Mt. Sylvan, Texas. It does not proceed from your communication whether the enlargement of the submaxillary glands and the coughing are due to the same causes or not. It is possible that the coughing may be simply due to a catarrhal affection, but it may be far more serious. Your filly, therefore, requires, above all, a thorough examination.

Wants a Syringe.—J. E. B., Antverville, S. C., writes: "Where can I buy a horse syringe, and what is the price?"

ANSWER:—Syringes are usually kept in stock by druggists; at any rate, they can be obtained through them; otherwise, apply to a dealer in surgical instruments. The price entirely depends upon the size of the syringe and the material it is made of. About three dollars may buy a fair article.

Numerous Questions.—L. H. B., Odessa, N. Y. 1. There is no such disease as lampass, consequently no cause and cure can be given. If the gums, which are always succulent in young horses, especially if kept on green food, should be swelled, the swelling may be due to various ailments; for instance, the shedding of teeth, diseased teeth, various digestive disorders, etc. 2. The foot (hoof) of a horse may become one sided, irregular or diseased by bad shoeing. 3. Concerning cribbing, consult recent numbers of FARM AND FIRESIDE.

About Rabbits.—S. L. C., Hampshire, W. Va., writes: "Please tell me what ails my rabbits. Some of them have warbles. One of them got down and could not get up. Its head was twisted to one side, and it remained that way about a week, then died. Another one did not get down, and her head was not twisted."

ANSWER:—The warbles are the larvae of some gad-fly. Besides that, your rabbits may have cystworms. You ought to have made a post-mortem examination.

A Milk-producing Filly.—J. B. H., Wilcox, Neb., writes: "One of my neighbors has a young colt that, at the time it was foaled, had an udder as large as a man's fist, which had milk in it. It is now nine days old, and still the milk runs from the udder or can be milked out. The colt nurses well and is lively, but often stands resting one hind leg, but she is not lame."

ANSWER:—Cases like the one described occasionally occur. They are not serious, and seldom require special treatment, because the secretion of milk will soon cease. Only in such cases in which the udder should be very full, so as to incommode the young animal, milking-out a few times will be necessary.

Keratitis.—M. D. H., Whigville, Ohio. What you describe seems to be an inflammation of the cornea (Keratitis), attended with considerable catarrhal affection of the eyelids. If the eyes of your horse are very much irritated, you may apply an eye-water composed of muriate of morphia, 1 part, to distilled water, 250 parts, until the irritation has disappeared. Then you may substitute an eye-water composed either of corrosive sublimate, 1 part, to distilled water, 1,000 parts, or of nitrate of silver, 1 part, to distilled water, 250 parts. These eye-waters are best applied by means of a small glass pipette, capped with a rubber bulb. The druggist will show you how to do it. The application should be three times a day. If the eye is not much irritated, the morphia solution may be omitted.

Swelling Beneath the Lower Jaw.—J. R. P., Morgan City, Utah, writes: "My four-year-old horse had distemper last winter. He broke under the jaw a number of times. He was turned on the grass this spring. Something like a tumor, as large as your two fists, has formed under the jaws. It has been there about two months, is loose and hard, not fast to the bone."

ANSWER:—If your horse had distemper, the swelling, which you call "something like a tumor," is probably a multiple abscess and degenerated tissue. The pasturing of the horse, because compelling the same to keep his head low while grazing, caused considerable increase of the swelling. I would advise you to keep the horse in a stable where he can eat out of a manger and feed-box of convenient height, to carefully probe the openings of the abscess not yet closed, to enlarge them so that the pus and exudates can flow off, and then to apply strict antiseptic treatment. If there are fistulous canals, they may be canterized clear to the end with a stick of nitrate of silver.

Garget and Lymphangitis.—M. E. B., Chippewa Falls, Wis., writes: "We have a four-year-old Jersey cow that dropped her second calf in February. She gives thick, stringy and lumpy milk at times. Sometimes one quarter only, sometimes the whole udder is badly affected. We have never found any bloody matter. A lump about the size of a butternut came last spring on the hind leg, between the ankle and gambrel joint. It stayed about a year and broke last May. It was opened to assist the flow of matter, and upon being pressed discharged thick matter, which would retain its form if placed on a smooth surface. She has been fed very liberally for a year and a half with ground corn and oats and wheat bran in about equal parts, and is very fat and playful as a kitten. The trouble with the milk is growing worse, affecting her about half the time during the last month. She gives a large quantity of very rich milk."

ANSWER:—The repeated cases of garget (thick, stringy and lumpy milk) require more frequent milking. So, for instance, if you milk three times a day instead of twice, they very likely will cease to occur, provided, of course, the milking is well performed. As to the abscess or broken tumor about the size of a butternut on the hind leg, it seems its appearance is due to lymphangitis, a disease which, in its chronic form, is difficult to cure in cattle, but does not seem to seriously interfere with the general health of the animal. If single abscesses make their appearance, you may succeed in effecting a healing by a judicious use of caustics; for instance, by applying a little finely-powdered sulphate of copper, but new tumors or abscesses are apt to make their appearance.

Perfection Rein Guard; prevents horses switching over the lines. Agents and dealers coin money. Sample \$1, with circulars. Half interest for sale. Andrew V. Callahan, Salem, O.

The "Yankee" Fish Hook.
WILL CATCH ANYTHING.
SAVES BAIT, TIME, LINE AND MONEY.
Send 25 cents for box of assorted sizes, or stamp for circular.
YANKEE HOOK CO.,
BROOKLYN, N. Y.
Mention this paper when you write.



Cancer is Curable

Without the knife, still harsher caustics, or poisons. The Sanitarium treatment very successful even in extreme cases. No poulticing, no running sore. Removes every cancerous cell. For all information address

J. D. MITCHELL, M. D., Hornellsville, N. Y.
Mention this paper.

10 CENTS (Silver or stamps) for printing your address boldly on gummed paper in either the LADIES OR GENTS GILT EDGE DIRECTORY for an entire year. Thousands of firms whose addresses we have want the names of such persons, to each of whom they mail hooks, novelties, magazines, pictures, cards, papers, letters, catalogues, etc. Free as samples. Our Directory patrons receive bushels and barrels full of mail within a year, each parcel with their holdly printed address pasted thereon. Try it. Better than any lottery. No blanks. Everyone receives prizes daily. You will receive biggest mail of anyone in your town and he will be pleased and amazed at the presents you will receive for so small an investment. Our regular price is 25c. but to all who have never tried our Directory, we will make the price 10 cents. Don't subscribe dollars for high priced magazines and papers when for 10 cents you can receive daily, more sample magazines and other choice and varied reading matter than your brain can digest in a year. Rush on your address PLAINLY written. State in which Directory you want your address inserted, Ladies or Gents. 10c. for either, 20c. for both, GILT EDGE DIRECTORY CO., No. 2 Pepper Building, Philadelphia, Pa. Mention this paper when you write.

GOLD PLATED BOX JOINTS.
WARRANTED GENUINE.
Don't buy a common looking silver watch when you can now obtain for the small sum of \$4.95 a handsome genuine 14 karat gold plated hunting case, full engraved watch with a first-class full jeweled movement, a perfect time keeper, genuine full plate handsomely damasked and ornamented, fully equal in appearance to the watches regularly sold by jewelers at from \$25 to \$35. In carrying this watch you have the credit of carrying a solid gold watch, as the plating process is got down so fine now-a-days that it is almost impossible to detect the difference. The engraving on the case is just the same as on the high priced watches, and is in the very latest and latest patterns. Some will doubt our ability to be able to supply such a watch at this price, and to convince you that we mean just what we say, we make the following most extraordinary offer for next 30 days.
READ!
Cut this out and send it with your order, and we will promptly ship the watch to you by express C. O. D. with instructions to the express agent to allow you to examine it at the express office. If on examination you are convinced that it is a bargain, pay the agent \$4.95 and the express charges and it is yours; otherwise you pay nothing and it will be returned at our expense. We could not afford to make such an offer as this unless we were confident that the watch will not only please you, but be a surprise to you. Bear in mind this price will be for 30 days only.
THE NATIONAL M.F.G. AND IMPORTING CO.,
334 Dearborn St., Chicago, Ill.
Mention this paper when you write.

If afflicted with sore eyes use Dr. Thompson's Eye-Water

"PERFECTION" HAMMOCK CHAIR
WITH SUSPENDING ROPES.
This hammock chair is a luxury for hot weather. It can be instantly hung from a tree or arbor and combines the features of both hammock and swing. We send it complete with ropes, hooks and slings which adjust it to any height. It will hold a grown person and is a delight to the children.
Premium No. 541.
Give as a premium for 3 subscribers to either the Ladies Home Companion or Farm and Fireside at 50 cents each.
Price, including one year's subscription to either paper, \$1.
We offer it for sale for only 75 cents. Postage or express paid by us in each case. Give your express station if different from your post-office address.
FARM AND FIRESIDE,
Philadelphia, Pa., or Springfield, Ohio.

WORK AND PAY. Money made easily, more money made with a little effort, big money made by energy and business push, is the song of agents who are selling our picture, "Columbus at the Royal Court of Spain." Some are making as high as \$20.00 a day, but that means work. "Keeping everlastingly at it brings success." Work on this plan and success awaits you. See our grand offer on page 15.

Our Miscellany.

THE CLOVER.

Some sing of the lily and daisy and rose,
And the pansies and pinks that the summer-time throws
In the green, grassy lap of the medder that lays
Blukin' up at the skies through the sunshiny days;
But what is the lily and all of the rest
Of the flowers to a man with a heart in his breast
That has dipped himmin' full of the honey and dew
Of the sweet clover blossoms his babyhood knew?

I never set eyes on a clover-field now,
Or fool 'round the stable or climb in the mow,
But my childhood comes back just as clear and as plain
As the smell of the clover I'm sniffin' again;
And I wander away in a barefooted dream,
Where I tangle my toes in the blossoms that gleam
With the dew of the dawn of the morning of love
Ere it wept o'er the graves that I'm weepin' above.

And so I love clover—it seems like a part
Of the sacredest sorrows and joys of my heart;
And wherever it blossoms, oh, there let me bow,
And thank the good God as I'm thankin' him now;
And I pray to him still for the strength, when I die,
To go out in the clover and tell it good-by,
And lovingly nestle my face in its bloom,
While my soul slips away on a breath of perfume.

—James Whitecomb Riley, in *Agricultural Epitome*.

It is cheaper to make a good road than to make a bad one. The money expended on the wear and tear of your wagons, of your horses and harness is enough to make a good road.

ACCOMMODATIONS for musical entertainments at the world's fair have been decided upon, and the construction of the necessary buildings has been ordered. They include a recital hall, seating 500 people; a music hall, with accommodations for 120 players, 300 singers, and an audience of 2,000; a festival hall for performances upon the largest possible scale, with 200 players, 2,000 singers and an audience of 7,000. The music hall will contain a fine concert organ, and in festival hall will be placed an organ for chorus support.

SOME ignorant or malicious person started the report that the world's fair is bankrupt; that it had drawn its last cent and used its last postage stamp. And this false report has been published in hundreds and probably in thousands of newspapers. It is still spreading, and naturally is doing the fair harm. The fact is that the exposition has now \$2,500,000 cash in bank and about a million more in sight. It has not had, at any time for a year and a half, less than a million dollars to its credit in cash, and has had as much as \$8,000,000 at one time. During the last six months the money has necessarily been expended rapidly for constructing the great exposition buildings. About three quarters of a million a month has been paid out for this purpose. A like expenditure will be necessary for several months to come, and more money will be needed by October. The bulk of the receipts of the fair from admissions, etc., will not begin to come in, of course, until the fair opens. It is in order to tide the enterprise over until that time that the government has been asked to advance \$5,000,000. The most conservative estimate of the fair's receipts and expenditures places the former about \$1,000,000 in excess of the latter. There need be not the slightest fear of the fair being bankrupt, or even of its becoming "hard up" if the government gives the aid which has been asked and which is confidently expected. Should such aid not be given, the public can rest assured that Chicago itself, though it has raised almost \$11,000,000 and ought not to be expected to do more, will put its hand deeper into its pocket and will provide enough money to carry the fair through to the grand success which it is determined it shall be and which it certainly will be.

The fair is not bankrupt and will not be bankrupt. The only foundation for the injurious report referred to is the fact that the national commission, or supervising body, has expended all of the money which the government appropriated for its expenses for the current year. That body does not provide the money for constructing the buildings, gathering the exhibits or otherwise putting the fair in complete condition for the inspection of the public. This is done by the "World's Columbian Exposition," or local Chicago corporation. The fair will be dedicated and opened on time, and all bills will be paid.

The High Speed knitting machine made by J. E. Gearhart, Clearfield, Pa., will fill a want long felt. It is simple in mechanism, durable in construction, easy of operation, cheap in price and a necessity in every household. We have one of the machines in use and find it does excellent work in every line of knitting for family wear. See advertisement in another column and send for circulars.—Hort. Ed. *Grange Bulletin*.

New York will have one of the finest state buildings at the world's fair. It will be 90 feet wide by 200 feet long, and three stories high. Inclusive of donated material and decorations, the structure will represent an expenditure of more than \$150,000.

ALL of the great world's fair buildings, except two, are practically finished. A portion of the interior finishing and decorating is all that remains to be done on most of them. On the manufactures building and machinery hall work is being pushed sixteen hours a day, and they are fast catching up with the other structures.

ETCHINGS—WHITE WINE.

A gentle breeze like the air swayed by a fan, in the invisible hand of night sent the white boat forward and athwart the silvery wake of the moon.

The hour on the tiny inland lake, which nevertheless seemed without shores—a part of the sky, its continuation as well as its reflection—had the quiet of eternity. It was broken only by the breath of the sail like the sigh of faithful sorrow and by the laughter of the tiny wake waves that leaped up as if to dry themselves in the moon.

Echo had long ago fled with the songs of the boat party. Now they sat silent, it was the hour of hand pressures, of fathoming glances, and the youth saw the maiden whom chance had placed beside him in rosy colors which were not friendship's. Love sat enthroned in propinquity.

Forward of the mast sat two, and when the sail shifted they bent toward each other, their hands met, their locks caressed. Although no ear in the boat could have heard what they said, yet they talked little; and less and less they spoke as the boat sailed on.

They were friends. To-day he had rowed her in a small boat to seek for water-lilies. But they had laughed and jested carelessly and freely.

Now they murmured in single words. He covered her white fingers with his palm. He looked at her and her eyes held him. The sail hung a curtain over them.

Drunk with the moon's white wine they kissed.

Suddenly the sail careened. A cold beam like a lance cut them asunder. Two voices soared and sang "Santa Lucia."

He listened to the clear soprano voice and smiled.

She drew back her tears.

Now the boat touched shore. While he gave his hand to the tall brunette girl who had sung, she disembarked, leaning on the arm of her affianced lover—the tenor.

A month later there were marriage bells in two cities.

The two who had kissed in the shadow of the sail were wed, but not to each other.

And both forgot—or did one remember?—*Willis Steele, in Short Stories.*

TO COUNTRY GIRLS.

If your lives have fallen into some quiet, unpretentious place, do not complain that it is dull and commonplace, and that "there is nothing to live for here," as I have heard so many do. Why, dear heart, there is no place on God's earth so bleak and barren, so quiet and lonely, so wind-swept and rain-beaten but that there is a great deal to live for right there, and when you have grown a little older you will see it with clear eyes; and you will look back to the country village and wish—oh, how you will wish!—that you had been bappy and content in that simple life. You will know, then, that it is nobler to live well a humdrum life than to wear out body and mind and soul in a fever of gaiety and frivolity, and to stretch out your empty hands always to something you cannot seize. Better to sing babies to sleep in the soft twilights that fold down over a cottage home, than to loll in velvet carriages and laugh at the brainless nonsense that men of the world whisper into your jeweled ears. And better, far better, to dwell forever away from the lights, and the roar, and the temptations, and the sins of the city, with a clean heart and a pure soul, than to let the city's passionate unrest creep into your pulses and set them to beating in a mad chase after—death.—*Amber, in Goodform.*

BE CAREFUL.

An erroneous idea seems to prevail with some people that they can make any machine for their own use, no matter whether it is patented or not, so they go no farther than making for their own use. Section 4,884, of the patent laws, however, gives to the patentee the "exclusive right to manufacture, use and sell," and to grant to others these rights, for seventeen years, after which the inventor gives his invention to the public. Many parties have gotten themselves into serious trouble and expense by such misconception of the patent laws, and we consider it our duty to call attention to this section of the United States laws.

DON'T TOBACCO SPIT YOUR LIFE AWAY

Is the startling, truthful title of a little book just received, telling all about *Nolobac*, the wonderful, harmless, economical, guaranteed cure for the tobacco habit in every form. Tobacco users who want to quit and can't, by mentioning FARM AND FIRESIDE, can get the book mailed free. Address THE STERLING REMEDY CO., Box 763, Indiana Mineral Springs, Ind.

GLEANINGS.

Mrs. Grover Cleveland is said to live in constant apprehension that her infant daughter, Ruth, will be kidnapped and held for ransom.

Of America's girls Ward McAllister says: "Nature seems to have implanted the principle in them of controlling themselves, in the first instance, and then in passing their lives in controlling others. The women govern this country. The New England woman, pure and simple, either commands the ship or soon shatters it by shipwreck."

Of the twenty-five patents taken out by Mrs. Martinot, the inventor, five have been patented in seven countries. She is very dexterous with her tools, makes her own models, and has invented, among other things, a gas-stove, an ice-cream freezer, a steam washing-machine and a clothes-dryer. This contradicts a frequent statement that women do not possess inventive genius.

The queen of the Belgians and Princess Clementine are very ordinary-looking women. The other day they were in an ordinary first-class railway carriage at Ostend, and a fat lady who wanted the compartment all to herself complained to the guard, and said she did not believe "such plain people had first-class tickets." This comes of traveling incognito.

A pretty and novel table decoration was thus arranged: Down the whole of the center-table ran a low, long zinc pan, about nine inches wide. This was entirely concealed by, and filled with, clover blossoms, which made a lovely glow of color on the white cloth. The pretty, green trefoil leaves of the clover were freely intermingled with the blossoms, and the menu cards were in the shape of clover blossoms.

Letters received by the Latin-American department of the exposition indicate that Mexican women will take a prominent place at the world's fair. The country has long been celebrated for the variety of its needle-work made by drawing threads from linen, which is known as Mexican work. Although now so fashionable in newer portions of the world, the making of it is an ancient art in Old Mexico, and exquisite specimens of the lace-like work are to be found in the antique altar-cloths of the ruined missions. The women also do curious and beautiful embroidery in silver and gold for the gorgeous sombrero, without which no Mexican horseman is perfectly equipped. Toluca women make by hand a peculiar kind of durable and pretty lace.

Nothing is more common than to neglect the small amenities and courtesies of life under the impression that they are needless. Where the affections are very strong they may survive this treatment, though even then much of their delicate fragrance is lost; but where they are of only moderate intensity it is pretty certain to kill them. When visits and letters gradually diminish and finally cease, when reunions are discontinued, when accustomed kindnesses are abandoned and sympathy grows silent, it is inevitable that the feelings which they represent should also decline. We learn to do without them; but when we imagine that our affections remain unchanged, we greatly deceive ourselves. They are the natural food of friendship, and without it a slow starvation process is certain.

NICE HANDS.

The best adornment for the hands at any time is the dainty elegance of well-kept finger nails; but this is an elegance not easily attained, especially where one is engaged in manual labor. It is possible, however, to preserve the beauty of finger nails, also that of the hands, by the observance of certain pre-

cautions, the avoidance of strong soaps and too hot water, and the application of proper remedies for dryness and tenderness of the skin. The hands of many persons are peculiarly liable to chaps and become troublesome. To remedy this condition and to strengthen, nothing is so excellent as pure glycerine diluted with two or three times its weight of water, to be rubbed into the skin before retiring. A pair of loose, soft, old kid gloves should then be drawn on and worn during the night. Before rubbing on the glycerine the hands should be washed and the nails cleansed. Where the chapped surface has been neglected and become sore, the parts should be kept constantly wetted with the diluted glycerine, or spread for a day or so with spermaceti ointment before beginning treatment with glycerine. And here a word may be said about glycerine; complaint is frequently heard that glycerine disagrees with the skin; this sometimes happens from applying it without dilution with water to a badly-chapped surface. By diluting pure glycerine with five or six times its bulk of water we gain a lotion which imparts delicacy, suppleness and an agreeable sensation to the skin. And its regular use permanently softens and strengthens, and preserves the skin from the effects of heat, cold and drying winds.—*Woman's Illustrated World.*

Harvest Excursions—Half Rates.

August 30th and September 27th.

The Burlington Route will sell round trip tickets at half rates, good 20 days, to the cities and farming regions of the West, Northwest and Southwest. Eastern Ticket Agents will sell through tickets on the same plan. See that they read over the Burlington Route, the best line from Chicago, Peoria, Quincy and St. Louis. For further information write P. S. EUSTIS, General Passenger Agent, Chicago.

ALFRED PEATS THE Wall Paper Merchant.

will send you his guide, "HOW TO PAPER," and 100 beautiful samples of fine

WALL PAPER

Good Paper, 3c. Gold Paper, 5c. FREE

Handsome Gold Parlor Paper 10, 12½ and 15c per roll, all with wide borders and ceilings to match. Will refer you to 10,000 Well Satisfied Customers. Agents' sample book, \$1.

ALFRED PEATS, 136-138 W. Madison St., Chicago.

KEMP'S DOUBLE HAY PRESS

FULL 2 FEEDS TO EVERY ROUND Spring Folder
CIRCLE
AUTOMATIC PLUNGER DRAW.
GIVEN FREE IF IT WILL NOT do all my circulars
AWAY FREE claim. Send for free circulars giving
full information. JAS. KEMP, Kempton, Ills.

Any of our readers who may be out of employment or in business that is not bringing them in good profits, should order an outfit of our picture, "Columbus at the Royal Court of Spain," and change their condition for the better. It is the best money-making business of the times. Two agents worked only eight hours and sold 52 pictures. This means for them over \$50.00 clear profit. Are you making more in that time? One lady received her outfit and sold 5 the first hour. \$5.00 an hour is certainly fair wages. See our offer on page 15 and enter the field yourself.

Kneeland's Crystal Creamery

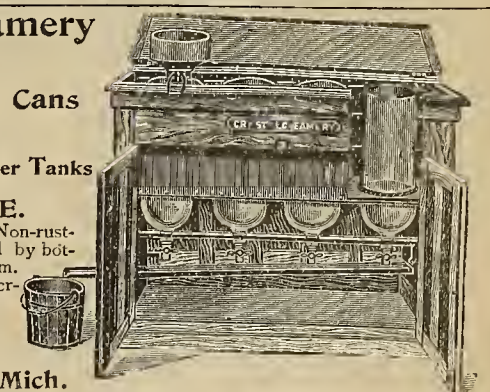
Only Creamery with Glass Milk Cans and Steel Plate Water Tanks

CREAM WITH OR WITHOUT ICE.

Practicable, Durable, Simple, Perfect, Profitable. Non-rusting. Non-corrosive, no Leaking. Sediment removed by bottom skimming. No dipping or slopping of milk or cream. Glass cans give more and better cream and butter. A perfect "Baby Separator" for small dairies.

Send for catalogues to

Agents wanted. Crystal Creamery Co., Lansing, Mich.



THE LANGUAGE OF FLOWERS

—AND—

FLORAL CONVERSATION.

"—not words, for they
But half can tell love's feeling;
Sweet flowers alone can say
What passion fears revealing."



This beautiful little volume has been compiled from the best authorities, and contains the following chapters: The flower language—principles; Flowers by the poets; Floral conversation; The old gardener's story; Expressions in bouquets; Secret correspondence; Floral decorations; Thanksgiving day; Christmas; Easter; Decoration day; Birthday celebrations; Weddings; Funeral ceremonies; The church; Cemetery decorations; Preparing skeleton leaves; Drying flowers with their natural colors; Autumn leaves; Drying sea mosses; Plants and flowers and their sentiments.

Premium No. 839 is paper binding, which we will mail to any one sending us one new subscriber to either the Farm and Fireside or Ladies Home Companion.

Price, including one year's subscription to either paper, 65 cents. We offer it for sale for 25 cents. Postage paid by us in each case.

Premium No. 512. Handsome cloth binding. Given for two new subscribers to either paper.

Price, including one year's subscription to either paper, 80 cents. We offer it for sale for 50 cents. Postage paid by us in each case. FARM AND FIRESIDE, Philadelphia, Pa., and Springfield, Ohio.

Smiles.

THE CARPENTER'S WOOING.

Oh I a door you, darling one,
I hall ways loved your laughter,
And window you intend to grant
The haud my hopes are rafter?
You're roof if you imagine that
I've not enough to board you;
We'll have a good square meal, for I
Can hammer steak afford you.
I sawyer father yesterday;
'Tis plane he'd have us marry.
Oh let us to the joiner's hie,
Nor let us shingle tarry.

The cornice is waving now, my love;
The gables all are ringing;
A lath! Why let me longer pine?
I'm sawdust when I'm singing.

—Chicago Post.

Love, put off your orange blossoms,
Love, put on your sealskin sack,
Love, put on your woolen mittens,
Love, winter is coming back.

—Minneapolis Times.

When you thump it with your fingers and it
gives a heavy sound,
Like summer rain a-fallin' on the dry an'
dusty ground,
Jes' get your Barlow ready, an' prepare to
make a swipe,
An' carve it straight an' steady till it opens
red an' ripe!

Then fold your Barlow careful an' take your
melon flat;
Put one half on this side o' you, the other half
ou that;
Then take the biggest in your lap an' tear the
heart out, so!

An' smack your lips, an' praise the Lord, from
whom all blessings flow!

—Atlanta Constitution.

JUST A MATTER OF OPINION.

HE had been having fun with
Dudekins right along, and he
made up what mind he had to
get even. It took the form of a
brilliant and cogent conundrum,
whose answer he thought was
locked in his manly bosom.

"I have a conundrum for you,
Miss Fannie," he said, when next he saw her.
"Ah," she replied, "what is it? Who gave it
to you?"

"I made it up myself," he asserted, bridleing
up somewhat.

"Indeed! What is it?"
"Why are my clothes like the moon?"
She hesitated a moment and Dudekins began
to look triumphant.

"You may think," she said slowly, and
Dudekins somehow felt the sand slipping
from under him, "it is because they have a
mau in them; and you have a perfect right to
think as you please, but, Mr. Dudekins, opin-
ions differ."—Detroit Free Press.

HE WASN'T SQUARE.

The Teuton is often a long time in learning
American idioms. One who had been here for
a year or more, and who could speak some
English before his arrival, a very short and
corpulent man, by the way, went to his gro-
cer's and paid a bill which had been standing
for several weeks.

"Now you are all square, Hans."
"I was vat?"
"You are square, I said."
"I was square?"
"Yes, you are all square now."

Hans was silent for a moment, then with
reddening face and flashing eye he brought his
plump fist upon the counter and said:

"See here, mine frient, I vil haf no more
beezness mit you. I treat you like a shentle-
men, I pay my pill, and you make a shoke of
me—you say I was square ven I know I was
round as a parrel. I doud like such shokes.
My peezeess mit you vos don!"

AN ABUSED WIFE.

Married daughter—Oh, dear! Such a time as
I do have with that husband of mine. I don't
have a minute's peace when he's in the house.
He is always calling me to help do something
or other.

Mother—"What does he want now?"
Daughter—"He wants me to traipse way up-
stairs just to thread a needle for him, so he
can mend his clothes."—New York Weekly.

WOMAN'S DIPLOMACY.

Mrs. Keene—"There are times when I wish I
were a man."

Mr. Keene—"For instance?"
Mrs. Keene—"When I pass a milliner's win-
dow and thiuk how happy I could make my
wife by giving her a new bonnet."—Puck.

HER POSITION.

Nellie—"I congratulate you, dear! Was it
an orthodox proposal—down on his knees,
and all that?"

Fannie (blushing)—"Not just that way, dear.
I—I believe I was on his knee. But don't ever
dare to mention it."—Pittsburg Bulletin.

THE WARRANT.

She—"Don't you think the Bible justifies
the practice of Christian science?"

He—"Certainly. It says, 'To die is gain.'"

HE GOT WORSE.

Pat O'Rourke—"Sorrah th' day Oi iver got
married t' th' loike av yez!"

Mrs. O'Rourke—"Shure, didn't ye take me
fer bettther or fer worse?"

Pat O'Rourke—"Yis, bad luck t' yez! Oi took
yez fer bettther."

OVERESTIMATION.

"What is the m'avin' av that black eye,
Dinnis?"

"That's a marruk av esteem."

"Av esteem?"

"Yis. Oi esteemed meself a better fighter
nor Mike McMaunus."—Washington Star.

BABY'S PICTURE.

Wife—"I'm tired to death. Been having
baby's picture taken by the instantaneous
process."

Husband—"How long did it take?"

Wife—"About four hours."—N. Y. Weekly.

THE EXACT LOCATION.

"Where do you stop when you are in New
York?"

"Generally at the end of a five-hundred-
dollar bill."

A REDEEMING TRAIT.

Minister (severely, to bad boy)—"Do you
smoke cigarettes?"

Bad boy—"Yes, but I don't collect the pic-
tures."

EASY.

"It is easy to tell a Republican from a Dem-
ocrat in Mississippi, isn't it?"

"Very; unless you happen to be color
blind?"

NONE WAS REQUIRED.

"And when you asked her to wed, she de-
clined?"

"Yes; she dismissed me without ceremony."

ONLY A WOMAN.

He (mysteriously)—"Can you keep a secret?"

She (ingenuously)—"I don't know; I never
tried to."—Detroit Free Press.

LITTLE BITS.

He—"Upon my word, I think I've gone
through every experience except hanging."

She—"Cheer up; that may come yet."

Tinkle—"Are you troubled with roaches at
your house, Winkle?"

Winkle—"Not at all. My daughter is taking
lessons on the banjo, you know."

She—"Oh, it's fun, I tell you, to flirt with a
man till you get him to propose, and then say
'No.'"

He—"Yes; but I should think it would be a
greater joke on him to say 'Yes.'"

City man—"What the blazes is the matter
with that hen?"

Farmer—"Nothing, she has just laid an egg."

City man—"Great Scott! One would sup-
pose she had laid the foundation of a brick
block."

Hicks—"I think I shall bring up my boy to
follow the sea for a livelihood."

Dix—"Why have you settled on that?"

Hicks—"It seems to be the only industry in
which one is not expected to begin at the bot-
tom."

Helen Troy—"How has your book on cook-
ing been received?"

Jane Cook—"Oh, very well; but one of the
papers made such a dreadful mistake. They
put a notice about it in the death column."

Truth.

"What do you think of that artist who
painted cob-webs on his ceiling so truthfully
that the hired girl worc herself into an attack
of nervous prostration trying to sweep them
down?"

"There may have been such an artist, but
never such a hired girl."—Exchange.

Visitor—"What bright eyes you have, my
little mau. You get plenty of sleep, I pre-
sume."

Little man—"Yes'm. Mamma makes me go
to bed every night at eight o'clock."

Visitor—"So you will keep healthy?"

Little man—"No'm. So she cau mend my
pants."

"I hear that Montgomery Montgomery has
taken his son out of college."

"Is that so? Was the youth getting rapid?"

"Oh, no; but his teacher asked him to work
out a problem in mathematics and he ob-
jected; said none of his folks had ever worked
out, and the father sustained the objection."

Detroit Free Press.

Mr. Jenks—"I see that a new law in Alabama
prohibits the selling of liquor withlu three
miles of a church or school-house."

The Colonel (from Louisville)—"That's a ter-
rible blow to Alabama."

Mr. Jenks—"Think so?"

The Colonel—"I should say so. In three
years there won't be a church or school-house
left in the state."—Life.

HOME STUDY. SUCCESS in BUSINESS

depends largely upon one's
training and knowledge of business af-
fairs. If YOU wish to succeed take a
thorough Business College course at Home, by Mail.
Highly commended as a Practical, Convenient and
Economical Plan of Study. Circulars and trial lesson
free. BRYANT & STRATTON, 449 Main St., Buffalo, N. Y.

LADIES WHO WILL DO WRITING

The tremendous sale of my preparation,
Gloria Water, has so increased my
correspondence that I will guarantee good wages to ladies who will do writing for me at home. Address
in own handwriting MISS EDNA L. SMYTHE, Box 1101, South Bend, Ind. Mention paper.

WILL MAKE GOOD WAGES.

YOUR NAME on 50 Silk Fringe, Envelope, Gold Bezel, Fancy Shawl and Ac-
quaintance Cards (all new), 1 Album, 200 samples of new cards, Games,
Tricks, etc., all for only 10 cents. CROWN CARD CO., CALIZ, CALIF.

CAMPAIGN BADGE, gold plated, Card Agt's Outfit
& Present 4c. Tuttle P. Co., No. Haven, Ct.

500 SCRAP PICTURES, AUTO, VERSES & RIDDLES
20 STYLES OF CARDS, & PRESENT
PARADE & CO., MONROVIE, CONN.

CARDS 228 New Samples of Silk Ribbon, Silk Fringe, Envelope & New Re-
sults Cards, Tricks, Songs, Games, etc., 1 Album, 1 Pack Envelopes, 1
Pack Acquaintance Cards, all for 2c. Crown Card Co., Caliz, Ohio.

YOUR NAME ON 25 LATEST STYLE CARDS
1 Auto, Album, 275 Album
Verses, 1 Ring, 1 Pocket Pen, 1 Fountain Pen, 1 Hat-
tial Handkerchief, STORY PAPER 3 MONTHS, and
Agent's New Samples, all 10c. CLINTON & CO., North Haven, Conn.

NAME ON 25 Silk Fringed Floral Cards,
400 Scrap Ornaments, 1000
Verses, etc., 1 Handkerchief, 1 Pocket Pen, 1
Watch Chain, 1 Ring, Agent's New Style Sample Book &
Outfit, all 10c. IVY CARD CO., HAMDEN, CONN.

Ohio Electric Co., Cleveland, want agents. Cat. free.

FLYING MACHINE Amusement for everybody.
All want it. Be the first.
By mail, 10c. COE MANUFACTURING CO., St. Louis, Mo.

BIG MONEY to agents; sample outfit Campaign badges,
25c., single gold plated badge, 10c. Box 26, Centralia, Mo.

CUT THIS OUT and send with your name and express
office address and we will send you free
to examine and wear, a SOLID GOLD finished watch that you can sell for
Ten Dollars. If it suits, you send us Four Dollars and express charges;
if not, return it to me. Mention whether Gold or Silver—also is desired.
W. S. SIMPSON, 37 College Place, N. Y.

WATCHES FREE To Boys and Girls. Address
MILLER TEA CO., 174 Ontario St., Cleveland, O.

RUBBER STAMPS. Best made. Immense Catalogue Free
to agents. The G. A. HARPER MFG. CO., Cleveland, O.

WATCH FREE—If you want one send a stamp to the
National Illus. Magazine, Washington, D. C.

6th and 7th Books of Moses, Alburtn Magnus,
Long Lost Friend, Mineral Rods and Dip
Needles. B. G. Stauffer, Bachmanville, Pa.

AR self-taught with out notes; 24 charts 50c
BANJO without notes (80 pp., 100 pieces) \$1.
Cir. & cat. of inst's free. E. C. HOWE, 85 Fifth av., Chicago

CUT IN TWO Prices of Sewing Machines. Safes, Scales,
Blacksmith's Tools, Road Carts, Buggies,
Gardens and 1000 other things. List Free.
CHICAGO SCALE CO., CHICAGO, ILL.

TO BOYS AND GIRLS UNDER 18
YEARS OF AGE, ON EASY CONDITIONS
WITHOUT ONE CENT OF MONEY.
Western Pearl Co., 334 Dearborn St., Chicago, Ill.

WANTED—Women to take crochet work to do at home.
City or country. Steady work. Particulars on appli-
cation. L. WHITE & CO., 209 State St., Chicago, Ill.

AGENTS WANTED to sell 15 fast sell-
ing articles, send
stamp for terms and sample quick. RATH & CO.,
325 KING STREET, POTTSTOWN, PA.

BEST PAYING THING for Agents is our PHOTO-
GRAPH FAMILY RECORD PICTURE.
We give you liberal terms. Address Dept. W
C. P. CORY & CO., 41 & 43 Jefferson St., Chicago.

AGENTS WANTED ON SALARY or COMMISSION, to handle the New
Patent Chemical Ink Erasing Pencil. Agents making
\$50 per week. Monroe Eraser Mfg. Co. x98, LaCrosse, Wis.

WANTED AGENTS—For our great Campaign
Book: Biographies of all Presidents. The only
Political Encyclopedia. Three volumes in one. Only
\$2.50. Magnificent prospectus 35 cts. Democratic or
Republican. CHAS. L. WEBSTER & CO., New York.

ALL GOODS ON TRIAL
ON EASY CONDITIONS.
CATALOGUES FREE. Write at once
to HOLLY WATCH CO., Jersey City, N. J.

NOVELTIES AGENTS
Convertible Wire Baskets, Handy Button, Self-
threading Needle & many others. Catalog sent free
V. Cassgreen Mfg. Co., 134 Van Buren St., Chicago, Illinois

AGENTS Coin Money selling
Beveridge's Automatic
Cooker. Every woman
buys. Best and cheapest
cooker sold. Big Profit to good workers, male or
female. Sample's weight 12 oz. Adv'g matter furnished
For circulars address W. E. BEVERIDGE, Baltimore, Md.

BICYCLES GIVEN AWAY
For a few hours active labor. Send 25c.
for "The Modern Queen," 16 pages, 64
columns Illus. Magazine, 6 mos. on
trial and full particulars. Modern
Queen Co., 100 Center St., New Haven, Ct.

\$7.50 FOR A DAYS' WORK.
GOOD PAY! STEADY WORK IF
DESIRED. Address
JAMES LEE & CO., 215 Dearborn St., Chicago, Ill.

A PRESENT.

SEND us your address and we will make you a
present of the best Automatic WASHING
MACHINE in the World. No wash-board or rub-
bing needed. We want you to show it to your friends,
or act as agent if you can. You can COIN MONEY
We first give a HANDSOME WATCH to the
first from each county. Write quick. Address
N. Y. LAUNDRY WORKS, 80 Murray Street, N. Y.

WE WANT YOU
To act as our agent. We will treat you well and pay
liberally for your services. The work is easy, pleasant
and adapted to both young and old of either sex.
GEO. STINSON & CO., Box 154, PORTLAND, ME.

GUARANTEED CURE
OR NO PAY.
Nothing Fairer Than This.
When we say cure, we do not mean simply to
stop it for the time being, but a
PERMANENT AND POSITIVE CURE
For Rheumatism, Neuralgia, Dyspepsia,
Headache, Constipation, Biliousness, Ner-
vousness, Sleeplessness, Impure Blood,
and all diseases arising from a disordered
Liver. Write for Treatise, Testimonials, and
Free Sample Bottle of
DR. ROC'S LIVER, RHEUMATIC,
and NEURALGIA CURE to
CULLEN & NEWMAN,
136 GAY ST., Knoxville, Tenn.



LOVELY FACES,
WHITE HANDS.
Nothing will
WHITEN and CLEAR
the skin so quickly as
Derma-Royale

The new discovery for dissolv-
ing and removing discolorations from the cuticle,
and bleaching and brightening the complexion. In
experimenting in the laundry with a new bleach for
fine fabrics it was discovered that all spots, freckles,
tan, and other discolorations were quickly removed
from the hands and arms without the slightest in-
jury to the skin. The discovery was submitted to
experienced Dermatologists and Physicians who pre-
pared for us the formula of the marvelous Derma-
Royale. THERE NEVER WAS ANYTHING LIKE IT. It is
perfectly harmless and so simple a child can use it.
Apply at night—the improvement apparent after a
single application will surprise and delight you. It
quickly dissolves and removes the worst forms of
moth-patches, brown or liver spots, freckles, black-
heads, blotches, sallowness, redness, tan and every
discoloration of the cuticle. One bottle completely
removes and cures the most aggravated case and
thoroughly clears, whitens and beautifies the com-
plexion. It has never failed—it CANNOT FAIL. It is
highly recommended by Physicians and its sure
results warrant us in offering

\$500 REWARD.—To assure the public of its
merits we agree to forfeit
Five Hundred Dollars cash, for any case of moth-
patches, brown spots, liver spots, blackheads, ugly
or muddy skin, unnatural redness, freckles, tan or
any other cutaneous discolorations, (excepting birth-
marks, scars, and those of a scrofulous or kindred
nature) that Derma-Royale will not quickly remove
and cure. We also agree to forfeit Five Hundred
Dollars to any person whose skin can be injured in
the slightest possible manner, or to anyone whose
complexion (no matter in how bad condition it may
be), will not be cleared, whitened, improved and
beautified by the use of Derma-Royale.

Put up in elegant style in large eight-ounce bottles.
Price, \$1.00. EVERY BOTTLE GUARANTEED.

Derma-Royale sent to any address, safely packed
and securely sealed from observation, safe delivery
guaranteed, on receipt of price, \$1.00 per bottle.
Send money by registered letter or money order with
your full post-office address written plainly; be sure
to give your County, and mention this paper.
Correspondence sacredly private. Postage stamps
received the same as cash.

AGENTS WANTED Send for Terms
Sells on Sight **\$10 A DAY.**
Address **THE DERMA-ROYALE COMPANY,**
Corner Baker and Vine Streets, CINCINNATI, OHIO.

AGENT made \$71 in four days selling my Electric Cor-
sets and Specialties. 100 PER CENT. profit and
Cash Prizes. Sample free. Dr. Bridgman, B'way, New York.

\$30 to \$50
A
WEEK

I WANT an honest, earnest
man or woman in every
county to take the sole agency
for an article that is needed
in every home and indis-
pensable in every office.
SELLS AT SIGHT, in
town or country. You can
make \$200 in three
months, introducing it, after which it will bring
you a steady income. Splendid opening for the
right person. Don't lose a moment. Good jobs
are scarce and soon taken. Write at once to
J. W. JONES, Manager, Springfield, Ohio.

MISS BEACH'S
Curling Fluid.

Keeps the hair in curl for days
Innocent and Cologne. A toilet
necessity. Not sent on trial.

30,000 Ladies Have Endorsed It
At druggists, or prepaid, 50c.
LADY AGENTS wanted.
DENISON CHEMICAL CO.,
56 (G) LaSalle St., Chicago, Ill.

Mention this paper when you write.

PARKER'S
HAIR BALSAM

Cleanses and beautifies the hair.
Promotes a luxuriant growth.
Never Fails to Restore Gray
Hair to its Youthful Color.
Cures scalp diseases & hair falling.
50c. and \$1.00 at Druggists

ARE YOU CONSUMPTIVE

Use Parker's Ginger Tonic. It cures the worst Cough,
Weak Lungs, Debility, Indigestion, Pain, Take in time, 50 cts.
Mention this paper when you write.

Fat People You can reduce your weight
10 to 15 lbs. a month at home
without starving or injury by
Dr. Clarke's Home Treatment. Proofs, Testi-
monials Free. F. B. Clarke, M. D. Drawer 133, Chicago, Ill.

FAT FOLKS Reduced 15 lbs. a month. Any one
can make more money. Safe and sure.
Particulars 2c. P. O. Box 404, C. St. Louis, Mo.

OPIUM Morphine Habit Cured in 10
to 20 days. No pay till cured.
Dr. J. Stephens, Lebanon, O.

RUPTURE Positive Cure. By mail. Send
for circular. Address Capt. W. A.
Collings, Smithville, Jefferson Co., NY

CANCER AND TUMORS scientifically
treated and cured. No knife.
Book Free. Drs. GAATGUY & NUNAN
163 Elm Street, Cincinnati, Ohio.

VARICOCELE We will send
you the
MARVELOUS
French reme-
dy CATHOS free. It is an absolute and perma-
nent cure. Use it and pay if satisfied. Address
Von Mohl Co., Sole Agents, Cincinnati, O.

PILES Remedy Free. INSTANT RELIEF. Final
cure in 10 days. Never returns; no purge;
no salve; no suppository. A victim tried
in vain every remedy has discovered a
simple cure, which he will mail free to his fellow suf-
ferers. Address J. H. REEVES, Box 8290, New York City, N. Y.

DEAFNESS & HEAD NOISES CURED
by Peck's Invisible Tubular Ear Cautions. Whispers
heard. Successful when all remedies fail. Sold FREE
only by F. HUSCO, 533 B'way, N. Y. Write for book of proofs.

If afflicted with
sore eyes use **Dr. Thompson's Eye-Water**

RUPTURE Positive Cure. By mail. Sealed
Book Free. Address Dr. W. S.
Rice, Box F, Southville, N. Y.

A SURE and permanent cure for Epilepsy, Fits, in 24
hours. Free to poor. A. A. Ferdinand, St. Louis, Mo.

\$6.00

A DAY.

\$36.00

A WEEK.

\$156.00

A MONTH.

Farmers, Merchants, Mechanics, Teachers, Students, Ladies,
and all classes of people are

Making Money Fast

And much easier than ever before, by acting as agents for our

GRAND HISTORICAL PICTURE, "COLUMBUS AT THE ROYAL COURT OF SPAIN."

Agents selling only 6 pictures a day are reaping a Grand Harvest of Dollars. Many of our agents, who are live, pushing fellows, are selling from 10 to 15 a day. Figure what their profits are—10 sales a day means a profit of \$60.00 a week, or \$260.00 a month of 26 working days; 15 sales a day, \$90.00 a week or \$390.00 a month.

Most Profitable Business You Can Engage In.

The exhibition of this picture in any locality is sure to bring hundreds of orders, and for this reason we will send to the first reliable person applying from each community where we have no agent, who will comply with the terms named in the coupon below, a

Fifteen Dollar Picture And Heavy Gold Frame For Only \$2.50

EXPRESS CHARGES prepaid by us to all points in Minnesota, Iowa, Missouri, Arkansas and Louisiana, and all states east of them. Persons ordering from any point west of these states may send us only \$1.50, they paying the express charges upon receipt of the picture, which is carried at a special low rate by all the express companies.

Every purchaser is given Free, one year's subscription to either the Farm and Fireside or Ladies Home Companion.

SIZE OF PICTURE, 20 by 28 INCHES. SIZE OF FRAME, 31 by 40 INCHES—Made of Heavy Gold Molding 6 Inches Wide.

See our full description in July 1st issue, and write at once for our liberal terms to agents.

ENTHUSIASTIC REPORTS FROM AGENTS

They are testimonials right from the field, and are but echoes of the unbounded praise which is given the picture wherever it has been sold

Never Saw Anything Take Like It—Will Sell 100 a Week.

Ship me one dozen framed pictures at once. As soon as I deliver these I will order more, as I have now orders for 4 dozen more. I never saw anything take like "Columbus at the Royal Court of Spain." I think I can sell 100 a week. JAMES E. WALSH, Connecticut.
July 21, 1892.

Better than a \$15.00 Picture—Frame Alone Worth \$6.00.

Gentlemen:—The beautiful picture, "Columbus at the Royal Court of Spain," received in perfect order, and I am well pleased with it. It is better than a \$15.00 painting. I could not make the frame for less than \$6.00. Will close my shop and go to work next week. July 11, 1892. W. J. WAKELIN, Vermont.

Is Bringing Him \$10.00 a Day Profit.

Dear Sirs:—Please send me another order book. I sold 10 framed pictures the first day, and am going to keep at it. It is the best thing to sell I ever handled. July 6, 1892. A. E. WARES, New York.

\$7.00 Profit in Four Hours.

Your picture received in good order. I started four hours ago and have taken 7 orders, so you see it sells. L. SMITH, Ohio.
July 18, 1892.

\$45.00 a Week Easily Made.

I took the picture out for two days, taking orders the first day for 9, and the second day for 7 pictures. This is promising indeed. July 10, 1892. WM. KAPHEIM, Illinois.

10 Orders the First Day.

I received the outfit Friday and was surprised at its beauty. On Saturday I took orders for 10. You will hear from me again soon. G. D. PERKINS, Illinois.
July 5, 1892.

Three Orders in Twenty Minutes.

I received the picture and am very much pleased with it. Before I had it 20 minutes I had taken 3 orders. July 12, 1892. C. H. LEEHAN, Wisconsin.

Do not delay; be the first from your locality to order and take advantage of this grand opportunity to get into a paying business. Agents are also offered a **FREE TRIP TO THE WORLD'S FAIR.** Write for particulars and terms to Agents.

A Man Half Way to the World's Fair.

Mr. Cumming, of Braceville, Ill., after a short yet spirited canvass, sends in for his first delivery an order for 156 framed copies of our famous historical picture, "Columbus at the Royal Court of Spain," which means to him a clear profit of \$156.00. What one agent can do others can. Don't wait any longer for something good to turn up; here it is, turned up right before you.

\$7.00 Clear Profit the First Afternoon.

Received your picture, "Columbus at the Royal Court of Spain," last Saturday afternoon. I was very much pleased with it, and took orders for 7 before bedtime, in this small place. I now have orders for 11. July 19, 1892. A. H. KENDALL, Vermont.

A Man Who Means Business.

I have canvassed only three days and sold 33 framed pictures. * * * I have bought a horse and wagon and started for one year's work. * * * I am expecting to go to the world's fair free, and don't you forget it. ROBERT R. NOBLE, New Jersey.
July 16, 1892.

COUPON

Entitling the sender to the Grand Fifteen Dollar Picture and Gilt Frame, and this paper one year, for Only \$2.50.

MAST, CROWELL & KIRKPATRICK, Publishers,
Springfield, Ohio.

For \$2.50 inclosed, please send me the Picture, "Columbus at the Royal Court of Spain," in the large Gilt Frame, made of 6-inch molding, and measuring 31 by 40 inches. Also send Farm and Fireside one year without extra charge. In return for my receiving the picture and frame and the paper one year at this low Special Price, I agree to show them to my friends and neighbors, to whom I will endeavor to make sales at the regular price.

Name.....

Post-Office.....

County..... State.....

Write Nearest Express Station here

Also send Farm and Fireside one year free, to my address as above.

If you are already a subscriber, when you accept this offer one year will be added to your present subscription.

Cut out, fill up and return to us the above coupon, with \$2.50, and we will send you the complete Picture and Frame, and also mail this journal one year free. If you are already a subscriber, one year will be added to your present subscription. Only one picture will be sold to one person on these terms, and that to the first applicant from a community.

\$30.00 a Day at the Start—His Motto, "The World's Fair for 5 of Us."

The outfit is received and more than fills my expectations. I have exhibited it one half day and taken 15 orders. To-day I will take not less than 25 orders. The picture is the easiest thing to sell I ever tried. I have hired three men on my farm and am going to give the sale of the picture all my time. I can find lots of customers everywhere I go, whether in the country or in the villages. I shall sell not less than one thousand copies in the next six months. When your picture struck me I could see so much money in it I could not stay on the farm, so I struck out and am taking all the orders I can carry. "The world's fair ahead for five of us" is my motto. Come, boys, grasp the fortune. July 18, 1892. CURTIS COFFEEN, Michigan.

Over \$50.00 Profit in One Day.

Two of us, working from 6 to 8 hours, have taken 52 orders for framed pictures. I think this is good, and am going to devote my whole time to it. N. B. JOHNSON, Virginia.
July 5, 1892.

Almost \$5.00 a Day Profit.

I have canvassed only about three days, and have taken fourteen orders. July 11, 1892. A. MAHAN, Massachusetts.

Equal to a \$150.00 Picture—Expects to Sell 1,000 Pictures by October 1st.

Gentlemen:—The beautiful frame and elegant picture, "Columbus at the Royal Court of Spain," received in perfect order. I think it equal to a \$150.00 picture I have seen at Brunswick, Me. It would be hard to tell which is the better of the two. I am pleased beyond words to express, and fail to see how you can afford to give so much for the money. I would not take \$150.00 for the picture if I could not get another. I believe I can sell 1,000 before October 1st. WONSLOW BOWERS, Maine.
July 11, 1892.

Fifteen Sold and Writes for More Order Books.

Dear Sirs:—I report progress. I have taken 15 orders. Please send me by return mail another order book. July 9, 1892. JAMES MAY, Pennsylvania.

Address FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

SHORT HOME-FREE. Only one student in each town given this privilege.
WRITE NEW RAPID College of SHORTHAND
BUEFALO, N.Y. Send stamp for full particulars.

PATENTS LEHMANN, PATTON & NESBIT,
Washington, D. C. Examinations Free. Send for circular.
University of the State of New York.
AMERICAN VETERINARY COLLEGE
139-141 West 54th St., NEW YORK CITY.
18th ANNUAL SESSION.
The regular course of lectures commences in October each year. Circular and further information on application to
A. LAUTARD, M. D., V. M.,
Mention Farm and Fireside. Dean of the Faculty.

OHIO NORMAL UNIVERSITY
THOROUGH, PRACTICAL, ECONOMICAL.
Last annual enrollment, 2,350 students. Sustains ten Departments. Students can enter at any time and be accommodated with suitable classes. No vacation except holiday week. U. S. Military Department connected with school. Drill optional. Extensive and well selected library. Good board, neatly furnished room and tuition, ten weeks, \$28; forty weeks, \$100; fifty-one weeks, \$123. Room and board in private families. Text books rented at minimum rates. First Fall term begins August 9th. Send for Catalogue.
H. S. LEHR, A. M., President, ADA, OHIO.

\$50 Down Buys a Farm-In Crop!

If you want an 80-acre farm in a good neighborhood; near railroads; good buildings and fences and now in crop, send to-day for my lists. 80, 160, 320-acres at prices from \$2.50 to \$20.00 per acre!

As my terms are ten years time and only

One-Tenth in Cash

any live farmer can make his crops "pay him out." This is better than raw land at any price. Pays an income from the beginning.

OTIS A. TURNER,

Room 5, New England Bldg, Kansas City, Mo.

HALF RATE HARVEST EXCURSIONS
TO Arkansas, Louisiana, Texas, Kansas, Nebraska, Colorado, Utah, Oklahoma, Indian Territory and other Western and South-western States via
MISSOURI PACIFIC RY.

And IRON MOUNTAIN ROUTE.

Tickets on sale at any coupon office in U. S. or Canada, on special dates in August, September and October. For particulars enquire of your nearest agent.

H. C. TOWNSEND, G. P. & T. Agt., ST. LOUIS, MO.

BICYCLES ON EASY PAYMENTS
No extra charge. All makes new or 2d hand. Lowest price guaranteed. Largest stock and oldest dealers in U. S. Catalogue free. Agts. wanted. Rouse, Hazard & Co., 32 E St., Peoria, Ill.

THIS MACHINE \$12
You can give this elegant machine a thorough test before sending us one cent. TRIAL FREE. All attachments free. Every machine warranted 5 years. For catalog, full particulars, etc., cut this adv. out and send to us to-day.
ALVAM MANUFACTURING CO., Chicago, Ill.

PICTURE FRAMES
Lowest Prices. Outfit FREE. Good Salary. Write to-day and secure general agency. Catalog FREE. ROBT. JOHNS, Mfr., Dept. 13, 51 & 53 S. May St., Chicago

The High Speed Family Knitter
Will knit a stocking heel and toe in ten minutes. Will knit everything required in the household from homespun or factory, wool or cotton yarns. The most practical knitter on the market. A child can operate it. Strong, Durable, Simple, Rapid. Satisfaction guaranteed or no pay. Agents wanted. For particulars and sample work, address
J. E. GEARHART, Clearfield, Pa.

PRICE \$180
We Sell DIRECT to FAMILIES
PIANOS ORGANS
\$150 to \$1500 \$85 to \$600.
Absolutely Perfect!
Sent for trial in your own home before you buy. Local Agents must sell inferior instruments or charge double what we ask. Catalogue free.
MARSHAL & SMITH Piano Co.,
265 East 21st St., N.Y.
Mention this paper.

CLEVELAND OR HARRISON!
To immediately introduce our large illustrated catalogue of Campaign Badges, Emblems, Watches and Jewelry, we will send an elegant Gold Plate **CAMPAIGN BADGE FREE** of all cost providing you send two stamps to pay the postage. State which one you want. Free offer limited to ones willing to show our goods. **WILLIAMS, 125 S. Halsted St., Chicago, Ill.**

MY WIFE SAYS SHE CANNOT SEE HOW YOU DO IT FOR THE MONEY.
\$12 Buys a \$65.00 Improved Oxford Singer Sewing Machine; perfect working, reliable, finely finished, adapted to light and heavy work, with a complete set of the latest improved attachments FREE. Each machine is guaranteed for 5 years. Buy direct from our factory, and save dealers and agents profit. Send for FREE CATALOGUE. Mention paper.
OXFORD MFG. CO., Dept. 24, CHICAGO, ILL.

Milk PRESERVATIVE.
Milkmen, Creamerymen and Dairy-men can keep Milk and Cream fresh a week without using ice. Healthful, tasteless, odorless and inexpensive. SAMPLE enough to make test, mailed for ten cents.
The Preservative Mfg Co., 10 Cedar St., New York.

"SUCCESS" Potato Digger
Talks for Itself.



Retail Price \$12.00, less freight.

ENGINES If you want to buy a strictly first-class outfit at low figures, address
The W. C. LEFFEL CO.
Greenmount Av. SPRINGFIELD, O.

FRUIT EVAPORATOR
THE ZIMMERMAN
The Standard Machine
Different sizes and prices. Illustrated Catalogue free.
THE BLYMYER IRON WORKS CO., Cincinnati, O.
Mention this paper when you write.

FOR BEST HAY PRESSES
[STEEL PRESSES]
SELF FEEDER
ADDRESS P. K. DEDERICK & CO.
10 DEDERICK'S WORKS, ALBANY, N.Y.
Mention where you saw this advertisement.

BEFORE YOU BUY A NEW HARNESS
send a 2c. stamp with your address for 72-page Illustrated Catalogue of 65 different styles of hand-made PURE OAK LEATHER HARNESS. Single Sets, \$7 up; Double Sets, \$16 up. Every harness warranted and shipped subject to approval. It costs only a 2-cent stamp to know what we can do for you. TRY IT.
King & Co., Wholesale Mfrs.
No. 5 Church St., Owego, N.Y.
Mention Farm and Fireside.



BEST FARM FENCE, made of GALVANIZED STEEL WIRE. FENCES AND GATES for all purposes. Write for free catalogue giving particular and prices. Address
THE SEDGWICK BROS. CO., RICHMOND, IND.
Be sure to mention Farm and Fireside.

Keystone Cider Mills
Do more work, and from the same amount of pulp produce **MORE CIDER** than any other Mill made.
Work Rapidly.
Run Easily.
COST LESS.
Send for circular.
KEYSTONE MFG. CO., Sterling, Ill.
Be sure to mention this paper when you write.

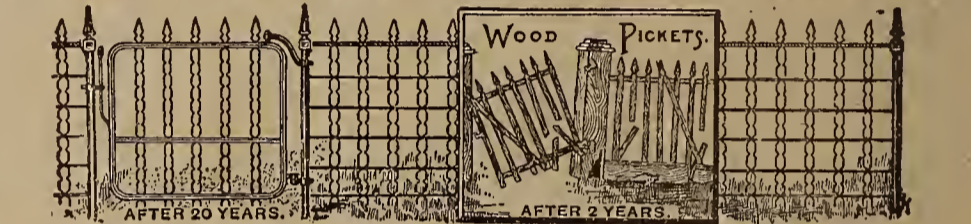
COLUMBIA STEEL Wind Mill
New in Principle. Beautiful in Appearance. POWERFUL IN OPERATION.
Contains COVERED INTERNAL GEAR.
UNEQUALED IN THE LINE OF Pumping Wind Mills
We solicit the closest investigation. Also
COLUMBIA Steel Derricks,
Iron Turbine Wind Engines, BUCKEYE Force & Lift Pumps, Tank & Spray Pumps, BUCKEYE & GLOBE Lawn Mowers, Iron Fencing, Cresting, &c.
Write for circulars.
MAST, FOOS & CO., SPRINGFIELD, OHIO.
MENTION THIS PAPER WHEN ANSWERING ADVERTISEMENTS.



HARNESS
FROM \$5.00 UPWARDS.
This cut shows our \$5.50 Harness which we make a specialty of and **DEFY COMPETITION**
Read our book of voluntary Testimonials from our customers and see what they think of Barkley Goods and Business Methods. It will pay you to do so.
For 22 consecutive years we have manufactured and sold to dealers, BUT NOW we are selling direct to consumers, saving you the traveling man's expenses and dealer's profit. Write for illustrated catalogue and prices.
FRANK B. BARKLEY MFG. CO., CINCINNATI, O.
BARKLEY \$70. PHAETON
BARKLEY \$152. CABRIOLET
Always mention this paper when you write.

BUCKEYE GRAIN & DRILL
Perfect FORCE FEED FOR GRAIN & GRASS SEED.
With the Celebrated GLASS FERTILIZER DISTRIBUTOR
Greatest Improvement of the Age.
CENTER GEAR Ratchets in Ground Wheel
New LEVER shifting the HOES
One-half the hoes forward and the other half back. This combined Drill has no equal on the market and can not fail to be appreciated by any farmer who sees it.
BRANCH HOUSES: Philadelphia, Pa.; Peoria, Ill.; St. Paul, Minn.; Kansas City, Mo.; San Francisco, Cal.
Send for Circular to either of the above firms or to
P. P. MAST & CO., SPRINGFIELD, OHIO.
ESTABLISHED 1854.

THE COST IS THE SAME



The Hartman Steel Picket Fence
Costs no more than an ordinary clumsy wood picket affair that obstructs the view and will rot or fall apart in a short time. The Hartman Fence is artistic in design, protects the grounds without concealing them and is practically everlasting. ILLUSTRATED CATALOGUE with PRICES and TESTIMONIALS Mailed FREE.
HARTMAN MFG. CO., BEAVER FALLS, PA.
102 Chambers St., New York; Southern Sales Agency, 51 and 53 S. Forsyth St., Atlanta, Ga.
T. D. Ganse, General Western Sales Agent, 508 State Street, Chicago, Illinois.
Be sure to mention this paper when you write.

TIME IS MONEY
WHICH YOU CAN SAVE BY USING THE
Queen Washing Machine
One washer sold at wholesale price where we have no agent. For full particulars and catalogue, address
The Buckeye Churn Co., P. O. Box 68, Sidney, Ohio.
Mention this paper when you write.

WELL DRILLING MACHINERY,
MANUFACTURED BY
WILLIAMS BROTHERS, ITHACA, N. Y.,
Successors to the Empire Well Auger Co.,
Mounted and on Sills, for deep or shallow wells, with steam or horse power.
Send for Catalogue.
ADDRESS
Williams Brothers ITHACA, N. Y.
Mention where you saw this advertisement.

ERTEL'S VICTOR
SHIPPED ANYWHERE TOGETHER ON TRIAL AGAINST ALL OTHERS.
HAY PRESS
DOING MOST AND BEST WORK.
GEO. ERTEL & CO., QUINCY, ILL.

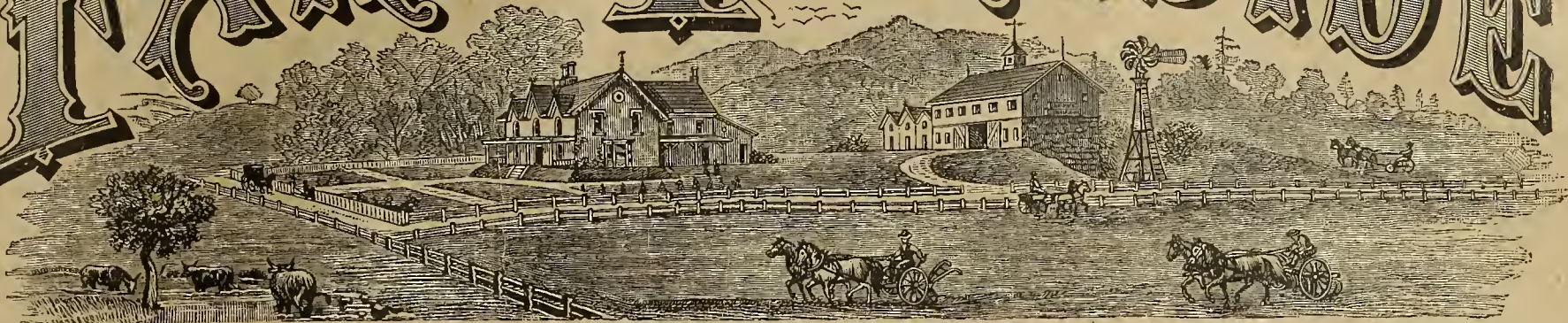
IDEAL In Name and In Fact.
DEAL Steel WIND MILL
and Three Post STEEL TOWER.
The LATEST and BEST.
8, 9, 12 ft. Geared.
10 and 12 ft. Ung geared.
TOWERS, 30, 40, 50 & 60-ft. Mills with or without graphite bearings.
STOVER MFG. CO., 507 River St., FREEPORT, ILL.
Mention this paper when you write.

FREE Stop right here! Read this add!
We will send it to you for nothing.
Do You Know a Good Thing When You See it?
The Finest Catalogue and Handbook of Musical Instruments ever issued. 28 pages, illustrated in colors with Portraits and Photo-Lithographs, giving full particulars of the celebrated Cornish
PIANOS AND ORGANS
You buy a Piano or Organ direct from our factory at cost price, thus saving from 50 to 100 per cent. DON'T buy elsewhere till you see our Catalogue. When you have examined it YOU WON'T BUY ELSEWHERE. BE WISE IN TIME. Don't fill agents' pockets with your hard earned money; get every cent of value for yourself, and buy direct from the manufacturer. Send at once for our Catalogue; it is FREE TO ANY ADDRESS. Write us.
CORNISH & CO., (Old Established and Reliable) WASHINGTON, New Jersey.
Always mention this paper.

FREE For 30 Days. Wishing to introduce our CRAYON PORTRAITS and at the same time extend our business and make new customers, we have decided to make this Special Offer: Send us a Cabinet Picture, Photograph, Tintype, Ambrotype or Daguerrotype of yourself or any member of your family, living or dead and we will make you a CRAYON PORTRAIT FREE OF CHARGE, provided you exhibit it to your friends as a sample of our work, and use your influence in securing us future orders. Place name and address on back of picture and it will be returned in perfect order. We make any change in picture you wish, not interfering with the likeness. Refer to any bank in Chicago. Address all mail to **THE CRESCENT CRAYON CO.** Opposite New German Theatre, CHICAGO, ILL. P. S.—We will forfeit \$100 to anyone sending us photo and not receiving crayon picture FREE as per this offer. This offer is bonafide.
When you write, mention this paper.

FREE during July and August.—Send us at once a photograph or a tintype of yourself, or any member of your family, living or dead, and we will make for you one of our finest \$25.00 life-size CRAYON PORTRAITS absolutely free of charge. This offer is made to introduce our artistic portraits in your vicinity. Put your name and address back of photo, and send same to Tanqueray Portrait Society, 741 DeKalb Ave., Brooklyn, N. Y. References: Rev. T. DeWitt Talmadge, all newspaper publishers, Banks, and Express Companies of New York and Brooklyn.
Mention this paper when you answer advertisements.

FARM & FIRESIDE



EASTERN EDITION.

VOL. XV. NO. 23.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, SEPTEMBER 1, 1892.

TERMS (50 CENTS A YEAR.
24 NUMBERS.)

The Circulation of FARM AND FIRESIDE
this issue is

250,800 COPIES.

The Average Circulation for the 24 issues of
the last 12 months has been

273,137 COPIES EACH ISSUE.

To accommodate advertisers, two editions
are printed. The Eastern edition being
100,800 copies, the Western edition
being 150,500 copies this issue.

Farm and Fireside has More Actual
Subscribers than any Agricultural
Journal in the World.

Current Comment.

SENATOR CARLISLE, the ablest states-
man of the Democratic party, occu-
pies no uncertain position on the
money question. His answer to a letter
asking if he favors the free coinage of sil-
ver contains the following:

"The answer to your question depends
largely upon what you mean by the free
coinage of silver. If you mean the policy
urged by many, under which the govern-
ment of the United States would be
compelled by law to receive sixty-eight
cents' worth of silver bullion when pre-
sented by the owner, and coin it at the
expense of the people of the country, and
compel the people by law to accept the
coin as the equivalent of one hundred
cents, my answer is that I am not now
and never have been in favor of it.

"I am opposed to free coinage of either
gold or silver, but in favor of unlimited
coinage of both metals upon terms of ex-
act equality. No discrimination should
be made in favor of or against the other;
nor should any discrimination be made
in favor of the holders of gold or silver
bullion against the great people who own
other kinds of property. A great govern-
ment should treat all of its citizens alike,
and whatever it attempts to do otherwise
it will engender a spirit of discontent,
which sooner or later must disturb the
harmony if not the peace of society.

"Gold and silver bullion should be
treated exactly alike in the mints of the
United States; a dollar's worth of gold
should be coined into a gold dollar, and a
dollar's worth of silver should be coined
into a silver dollar, and if no charge is
made for coining one, then no charge
should be made for coining of the other.

"Neither gold nor silver coins, except-
ing subsidiary coins, will ever again enter
very greatly into the circulation of any
great commercial country, but they will
serve only as a basis for the issue of the
currency. Any measure that would
broaden this basis would benefit the world
generally, but this cannot be done by the
fabrication of two coins of the same de-
nomination but of unequal intrinsic value.
This has been demonstrated by our expe-
rience during the last fourteen years with
silver as a legal tender, and we are still on
a gold basis.

"There are only two ways in which the
basis of circulation can be broadened by
the use of silver as part of the real money.
First, by the coinage of the silver dollar
containing a dollar's worth of silver; sec-

ond, by an international agreement on a
ratio.

"It is impossible for any nation to pro-
vide a stable ratio; an international con-
ference is the only tribunal that can ex-
tricate us from this position."

In conclusion, the senator says he will
support any measure that will fully re-
monetize silver and insure equality of the
dollars coined from the two metals, and
he sincerely hopes that the approaching
conference will be able to reach such an
agreement as will meet the approval of
all governments participating in it.

These brief extracts from a notable letter
show that the senator takes a strong po-
sition against free silver coinage, and in
favor of bimetalism, with equality se-
cured by the equal bullion value of gold
and silver coins, or by the establishment
of an international ratio between the two
metals.

ARE there not two young men in each
county of Ohio who can accept and
make good use of a free scholarship
for a two years' course of instruction in
agriculture?

The Ohio State University offers a free
scholarship in the short course in agricul-
ture to one student annually from each
county in Ohio. Each scholarship covers
all college dues and is valid for two years,
hence each county may have two scholar-
ships. The appointments are made by
the county board of agriculture, to whom
applications for scholarships for the com-
ing two years should be made at once.
The fall term begins September 14th.

This course is designed for those young
men who wish to get a fair understanding
of the more important sciences underly-
ing the practice of farming, fuller knowl-
edge of the crops of the field, orchard and
garden, and the live stock of the farm, a
better understanding of the chief farm
methods and practices, together with a
knowledge of the commoner diseases of
animals and plants and of insect depreda-
tions. The farm, gardens, orchards, vine-
yard, forest tree plantation, greenhouses,
veterinary hospital, laboratories, library,
museums and illustrative materials, and
a large corps of instructors, furnish the
earnest student ample opportunities for
study. No young man who expects to
become a farmer can afford to be without
this instruction.

Work in the farm and gardens give a
limited number of students an opportu-
nity to earn money. A number of stu-
dents are earning a part, and a few all, of
their expenses.

For further information, address Pres-
ident W. H. Scott, Columbus, Ohio.

In connection with this offer, read the
following:

"Give me a picture of the ideal farmer
of the future," asked a correspondent of
the *Chicago Herald*, of the secretary of
agriculture recently. "What must he be
to succeed?"

"The only hope of the American farmer
will be his brains," replied General Rusk.
"The sharp competitions between sections
and countries which will be induced by
increased facilities for transportation will
stir the agriculturist up to his best efforts.
His chances for fortune making will be
great, but he will have to be prepared to
fight the battle of competition for them.
He must be sufficiently well educated in
science, as far as it is applicable to agri-

culture, and he must be intelligent enough
to study his surroundings and to apply
his knowledge to the conditions about
him. He will be able to meet his fellow-
citizens on an equal footing, and his
brains will command from his class in
the industry which he represents the re-
spect and consideration which he deserves,
and he will give other classes and other
industries due respect in return. The
farmer of the future will be a business
man, able not only to compel his soil to
do its best in the matter of production,
but to study the markets and know what
will sell the best and what will command
the highest price. This farmer will keep
his accounts like any other business man,
so that he may know exactly where his
profits are and where they have been."

THE National League for the Protec-
tion of American Institutions is a
strong organization, absolutely un-
sectarian and non-partisan in character.
Its objects are to secure constitutional
and legislative safeguards for the pro-
tection of the common-school system
and other American institutions, and
to promote public instruction in harmony
with such institutions, and to prevent all
sectarian or denominational appropri-
ations of public funds.

In furtherance of these objects, it is en-
deavoring to secure an amendment to
the United States constitution prohibiting
sectarian legislation. This proposed XVI
amendment reads as follows:

"No state shall pass any law respecting
an establishment of religion or prohibiting
the free exercise thereof, or use its prop-
erty or credit, or any money raised by
taxation, or authorize either to be used,
for the purpose of founding, maintaining
or aiding, by appropriation, payment for
services, expenses or otherwise, any
church, religious denomination or relig-
ious society, or any institution, society or
undertaking, which is wholly, or in part,
under sectarian or ecclesiastical control."

Last January this amendment was in-
troduced into both houses of Congress,
and referred to the respective committees
on the judiciary.

The committees granted the league an
attentive hearing on the amendment, and
the house committee ordered the argu-
ments printed for the use of its members.
These committees will probably report at
the second session of the present Congress.
In anticipation of action by Congress on
the amendment next winter, over three
hundred thousand autograph memorials
from citizens have been sent to members
of Congress, and the work of preparing
and sending them still continues.

The amendment has been indorsed by
various patriotic American orders, thus
securing the co-operation of more than a
million and a half voters.

The amendment has the approval and
the league the support of many of the
most influential journals of the country.

THE experience of last fall taught a
lesson that the wheat growers of the
winter-wheat belt should never for-
get. At and after the time of sowing
wheat a drouth prevailed. The fall
growth was very short. In fact, until the
exceptionally heavy rains of spring
brought it forward, the wheat crop prom-
ised to be a very small one. Spring
weather was unusually favorable to win-
ter wheat, considering its condition in

the fall and winter. A fair crop having
been secured under these circumstances,
growers are apt to forget the condition of
wheat last fall, and neglect the lesson
taught.

An abundance of rain has fallen during
the summer, and the subsoil reservoirs of
our wheat-fields contain sufficient moist-
ure to insure quick germination and rapid
growth of the wheat sown next fall, if it can
be preserved for that purpose. Can that be
done? Sufficient can be preserved for the
purpose by the proper preparation of the
seed-bed. On land plowed for wheat, the
harrow should follow immediately and
put a mulch of fine surface soil to prevent
the escape of the water from the subsoil
reservoir by capillary attraction. After
every hard rain, break the crust with the
harrow and keep the mulch of surface
soil. It will preserve sufficient moisture
for the germination and early growth of
the wheat, and put it in the best possible
condition for winter. If a fall drouth oc-
curs, the wheat-fields are in the best pos-
sible condition to withstand its effects.
On the other hand, if there is an abun-
dance of rain at seeding-time, no harm
will have been done by this careful prepa-
ration and care of the seed-bed. Thor-
ough cultivation of the soil makes the
plant-food it contains quickly available
for the growing crop. "Tillage is man-
ure." With wheat, that work must be
done before the crop is sown.

From now until seeding-time keep the
harrow at work.

AN agricultural journal recently com-
pared dollar wheat with twenty-
five-cent butter in this way:
"When the farmer ships a thousand
dollars' worth of wheat, he pays freight
on thirty tons of his product. When the
creameryman ships a thousand dollars'
worth of butter, he pays freight on two
tons." This is one advantage of the
creamery over the granary.

A much greater advantage will be seen
by considering the fertility taken from
the farm by wheat and butter. Take the
three important constituents of plant-
food at their market rates in commercial
fertilizers:

		Lbs.	Value.
Wheat, 1,000 bushels	Phosphoric acid	523 @ .07	\$36.61
	Potash	307 @ .05	15.35
	Nitrogen	1,045 @ .15	156.71
			\$208.67

Butter, 4,000 pounds	Phosphoric acid	none.	
	Potash		
	Nitrogen		

Balance all in favor of the butter.

Again, the one thousand dollars' worth
of dollar wheat can be grown on forty
acres of land; one thousand dollars'
worth of twenty-five cent butter—four
thousand pounds—can be produced by
ensilage and clover, or by ensilage
balanced with proper grain rations, from
eight acres or less.

A CONTRIBUTOR to the *Rural New-
Yorker* concludes an interesting
article on ensilage with this state-
ment: "I am probably called a silo en-
thusiast; but as I can get a thousand
pounds of twenty-five-cent butter from
one acre of ensilage corn, properly
balanced with a suitable grain ration, and
fed to the right kind of cows, I try to bear
up under the name with becoming
modesty and meekness." This is another
"startler" for the scientific critic who
doubted Mr. Talcott's statement of the
cost of producing milk by feeding en-
silage and clover.

FARM AND FIRESIDE.

ISSUED 1st AND 15th OF EACH MONTH BY
MAST, CROWELL & KIRKPATRICK.

THIS PAPER HAS BEEN ENTERED AT THE POST-OFFICE
AS SECOND-CLASS MAIL MATTER.

We have an office at 927 Chestnut Street, Phil-
adelphia, Pa., also at Springfield, Ohio. Send your
letters to the office nearest to you and address

FARM AND FIRESIDE,
Philadelphia, Pa., or Springfield, Ohio.

TERMS OF SUBSCRIPTION:

One Year, - (24 Numbers), - 50 Cents.
Six Months, - (12 Numbers), - 30 Cents.

The above rates include the payment of postage by
us. Subscriptions can commence any time during the
year. Send for Premium List and see premi-
ums offered for obtaining new subscribers.

Payment, when sent by mail, should be made in
Express or Postal Money Orders, Bank-checks or
Drafts. WHEN NEITHER OF THESE CAN BE PROCURED
send the money in a registered letter. All post-
masters are required to register letters whenever re-
quested to do so. Do not send checks on banks in
small towns.

Silver, when sent through the mail, should be care-
fully wrapped in cloth or strong paper, so as not to
wear a hole through the envelope and get lost.
Postage stamps will be received in payment for sub-
scriptions in sums less than one dollar.

The date on the "yellow label" shows the time to
which each subscriber has paid.

When money is received the date will be changed,
which will answer for a receipt.

Discontinuances. Remember that the publishers
must be notified by letter when a subscriber wishes
the paper stopped, and all arrearages must be paid.

When renewing your subscription, do not fail to
say it is a renewal. If all of our subscribers
will do this, a great deal of trouble will be avoided.
Also, give your name and initials just as now on the
yellow address label; don't change it to some other mem-
ber of the family; if the paper is now coming in your
wife's name, sign her name, just as it is on label, to your
letter of renewal.

The Advertisers in this Paper.

We believe that all the advertisements in this paper
are from reliable firms or business men, and do not in-
tentionally or knowingly insert advertisements from
any but reliable parties; if subscribers find any of
them to be otherwise we should be glad to know it.
Always mention this paper when answering advertise-
ments, as advertisers often have different things ad-
vertised in several papers.

Our Farm.

A NOVEL ROLLER.

ROLLERS of various designs—
solid oak log, drum of cast-
iron, sectional serrated cast-
iron rings, etc.—are well un-
derstood, but I have not come
across in this country of inge-
nuity, even in the farm-
implement line, anything
like one I shall endeavor to describe. I
would not have taken the trouble to do so
were it not that I have years of practical,
satisfactory experience of its efficiency,
under special circumstances which occur
over and over again.

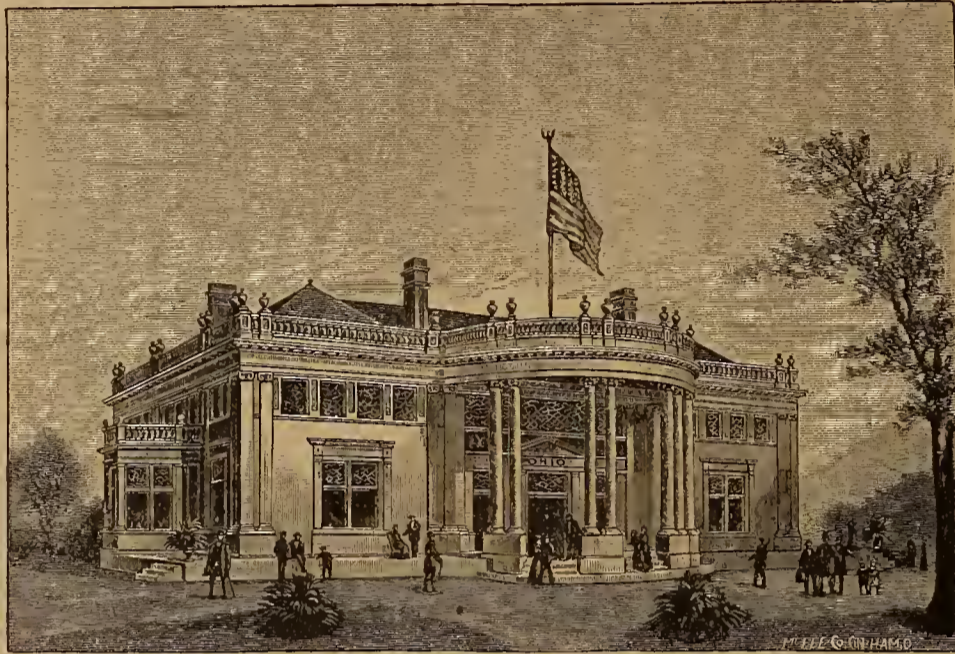
To some hints thrown out to the writer
by one of our esteemed gentlemen farm-
ers, who had the first view of my draw-
ing, that it was superseded by implements
like the Cutaway, Disc, Spade or Acme
harrows, I can say safely, no.

Every bit of land to be planted on in
the spring, or held over as fallow, for rest,
weeding and fertilizing until next au-
tumnal seed-time, should be autumn-
plowed stands no gainsaying, for such
have the benefit of pulverization by Jack
Frost. But many circumstances prevent
a farmer from doing so, and he is obliged
to let it stand until spring, when he has
often no choice of suitable times and con-
ditions. The soil is wet, stiff clay being
particularly pertinacious in retaining
water, and the furrows are turned over in
a shiny condition and left to dry, and
become baked under sun and draft.

footed" one to grub up, and in the interval
and last, pulverize with the double steel-
bar roller.

This roller consists of four cast-iron
rings with holes in their circumferences,
to which are riveted a number of one-
inch-square, steel bars, joining two to-
gether, forming a cylinder, as it were.
Through the nave-like center of these is
stuck an axle. Above these pairs of
"cylinders" is a strong, wooden frame,
necessary not only for the driver to
sit on, but to form the propelling me-
dium. It rests on vertical supports fitted
at both ends (and in the center be-
tween these "cylinders," if thought
fit) to the axle. The center horse steers
and balances this framework by two
poles, while all three pull by traces
and whiffletrees, which are so arranged
as to make the pull act direct on the
axle.

Each roller section is 3 feet in diameter
and 3 feet 3 inches long, making it 6 feet
6 inches over all. It is mechanically



OHIO STATE BUILDING, AT THE WORLD'S FAIR.

strong, light to pull and easy to turn on
its own axis.

Critics will here say: "But you use
three horses, whereas ours require two."
Well, this roller can also use two, for it is
light and of good diameter, but abandon-
ing the snail-pace progress, this roller
moves at a trot, and performs three times
as much work through its concussion,
friction with and weight on clods; will
break up and smooth the previously har-
rowed fields of stiff clay such as no other
implement can.

DESCRIPTION OF DIAGRAMS.

Fig. A.—Front section, showing one
section of the roller dressed with bars,
the other without, showing position of
rings, axle, etc.

Fig. B.—Transverse section, showing
the end of the ring and ends of bars, end
of axle, of the support of frame and ap-
plication of pulling disc on axle, of whif-
fletrees and poles.

Fig. C.—Plan of the wooden frame,
poles, whiffletrees, etc.

Figs. D and E.—Part of ring with two
bars united thereto, of actual size.

A.—Front section, showing O, frame; P
P, two poles; Q, standard (wood); F, steel-
bar cylinder; G, wheel; H, section of
wheel; N, axle; I, nave; K, standard sup-

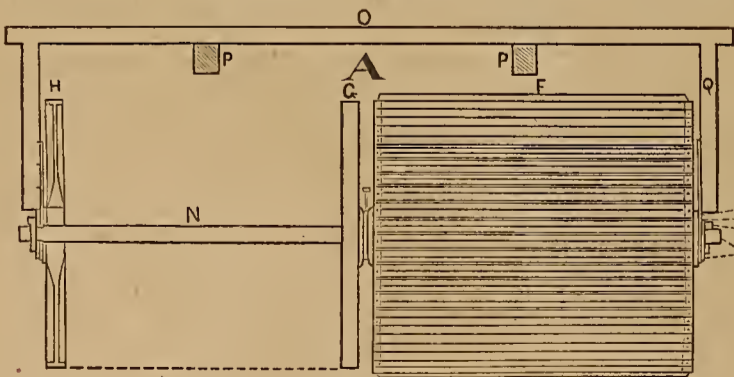


FIG. A.

Again, here is a field of clover to be
broken up in the after-summer, which
must be done in order, to satisfy the
craving for mathematically arranged rota-
tion, leaving the earth lumpy. By what
medium can one put such conditioned
fields in condition? By harrowing. By a
harrow not of the class "made to sell,"
but one which disintegrates the hardened
plow-cuts. First round by the square
one, fractionally to loosen the earth, and
the second one by the triangular, "duck-

port, iron plate; L, pin; M, draft-disc
connected with draft-iron.

B.—Side view, showing O, frame; P,
pole; Q, standard (wood); R, trace; S,
whiffletree; T, whiffletree bar (for three);
U, draft-iron in continuation of disc, M;
I, nave; K, standard support; L, pin; M,
draft-disc; N, axle; F, steel-bar cylinder.

C.—Plan. O, frame; N, axle; P P,
poles; F F, steel-bar cylinder place; U U,
draft-iron; T, whiffletree bar; S S S,
whiffletrees.

D.—Side view, full size. V V, steel bar;
W W, rivet; Y, wheel or ring.

E.—End view, full size. V, steel bars;
W, rivets; Y, wheel or ring.

A. BROOME.

OHIO STATE BUILDING, AT THE WORLD'S FAIR.

The building is colonial in style, size
100 by 100 feet, and is by McLaughlin,
architect, of Cincinnati, selected by the
State Association of Architects.

The material is wood, covered with
"staff," a fire-proof composition resembl-
ing stone.

In all furniture and decorations, Ohio
productions will be employed, each room
being furnished by an Ohio city. There
will be a reception hall, commissioners'
room, ladies' public and private parlors,
gentlemen's public and private parlors,
smoking-room, reading-room, assembly-
room, post-office, railroad ticket-office,
information-room, press-room, check-
room with safes, and a room for the Ohio

ashes. Can we then provide 110 pounds
of potash, 39 of phosphoric acid and 1,220
of carbonate of lime in fine condition in
some other form cheaper than ashes? An
application in the late fall of 20 bushels of
burned oyster-shell lime (40 pounds to
the bushel), at 12 cents per bushel, would
supply as much lime as a ton of ashes, at a
cost of \$2.40; 500 pounds of cotton-hull
ashes in addition would cost \$8.75, and
supply as much or more potash than a
ton of Canada ashes, and very consider-
ably more phosphoric acid. The weight
of these two things would be 1,300 pounds
as against 2,000 pounds of Canada ashes,
which involves a saving in cartage; the
cost, \$11.15—a little less than Canada ashes
cost on the average.

"The comparison is here made with
ashes of excellent quality. With ashes of
lower grade, which are more common in
our markets to-day, the showing for the
substitute would be much more favorable.
If cotton-hull ashes are not available, in
their place may be used 220 pounds of
high-grade sulphate of potash and 150
pounds of some cheap steamed bone and
800 pounds of oyster-shell lime, the three
costing \$11.10. The above-named mix-
tures would be close imitations of supe-
rior wood ashes, not only as respects the
kinds and proportions of fertilizing el-
ements, but also as to the form and com-
binations of these elements. Still cheaper,
and in most cases probably no less
effective, would be a mixture of 800
pounds (20 bushels) of burned oyster-shell
lime with 150 pounds of bone and 220
pounds of muriate of potash, the total
weighing 1,170 pounds and costing \$9.45.
The oyster-shell lime being caustic, should
be put on in the late fall or early spring,
and being fine and pulverulent, will soon
be converted into carbonate. Stone lime
could be used instead of oyster-shell lime,
but being in hard lumps, would require
slaking before being sown. The sulphate
or muriate of potash and bone are best
applied in spring."

My friends will see that in either case
the cost of any substitute for a ton of good
unleached ashes, with freight included,
will come pretty close to if not above \$11.
I confess I am prejudiced in favor of gen-
uine ashes, and would prefer them to any
substitute at prices named, provided the
ashes are guaranteed to contain at least
5½ per cent potash and nearly 2 per cent
phosphoric acid, and can be had, deliv-
ered at your door or near station, for from
\$10 to \$12 per ton. If muriate of potash is
used in the substitute formula, I see no
objection to its being applied in the fall or
winter. In fact, I should prefer that time
for the work, in order to give the rains
and snows a chance of washing the chlo-
rides out of the soil.

REMOVING TASSELS FROM CORN.—It is
often claimed that the removal of the tas-
sels of corn, either at their first develop-
ment—just leaving enough of them to
effect proper fertilization—or even after
the pollen has been shed, will increase
the yield of the grain. This looks plausi-
ble enough. Theoretically, the produc-
tion of tassels, etc., which we do not care
for, is wasted effort, and the plant's ener-
gies might be confined more closely to
the production of grain. To find out
whether practice upholds theory in this
matter, a number of tests have been made,
not only by individual growers and ex-

COMMENTS ON CURRENT STATION LITERATURE.

BY T. GREINER.

SUBSTITUTE FOR ASHES.—That wood
ashes are one of the best fertilizers for
fruit crops, and if supplemented with ni-
trogenous matter and perhaps bone, also
for general garden crops, is well known.
Most soils are benefited by liberal appli-
cations of such ashes, and not only im-
proved in fertility, but also in mechanical
texture. Where ashes can be had cheaply,
it will be in the farmer's interest to use
them largely. The whole question is
merely that of cost. A good quality of
unleached ashes is now being offered, by
W. S. Powell, at \$8 per ton; this is cheap

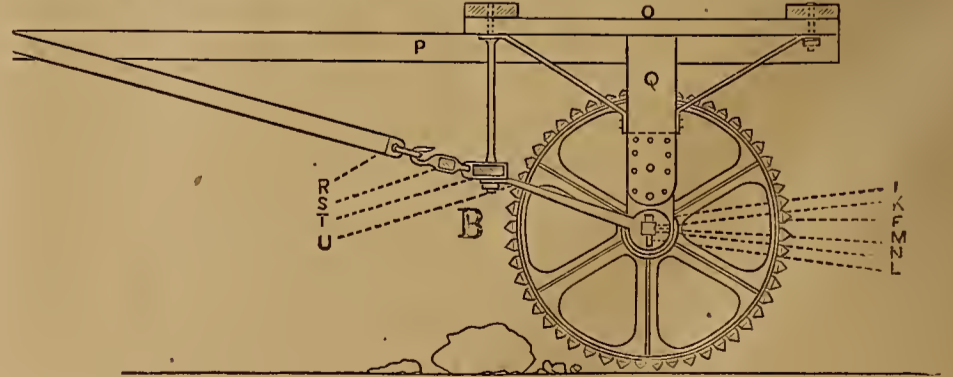


FIG. B.

enough. The trouble with most of the
Canada ashes is that they are too variable
in quality and, with all the freight, etc.,
added, often too expensive for the plant-
food they contain.

In bulletin No. 110 of the Connecticut
state experiment station are found some
remarks on unleached ashes and substi-
tutes for them. "It is safe to say," says
the bulletin, "that the carbonates and
phosphates of potash, magnesia and lime
constitute the entire agricultural value of

perimenters—among them the *Rural*
New-Yorker—but also by various exper-
iment stations. Before me is bulletin No.
40 of the Cornell University experiment
station, in which Geo. C. Watson reports
the outcome of experiments made on the
station grounds. The results here, as in
most experiments made elsewhere, did
not show gain enough in grain produc-
tion to be worth mentioning.

I quote from the bulletin as follows:
"Wherever an increase in yield has been

secured by removing the tassels, it seems to have been secured by removing them daily, or as soon as they make their first appearance, and that the object of removing the tassels is not accomplished whenever they are allowed to shed pollen or even expand." If this is true, I think it is a high price to pay in labor for the slight and uncertain gain in grain. The farmer cannot afford to go over his corn-fields every few days, removing tassels as they develop.

But there is another point which has not been taken in consideration. Leaf growth is absolutely necessary for the perfect development of ears. The careless removal of tassels will result in the removal of leaves, which again must have a deleterious influence upon the production of grain. If there is a gain in preventing the production of pollen, as wasted energy, this gain may be more than offset by lessening the leaf surface, and consequently lowering the digestive faculties of the entire plant. If I were to remove tassels at all, I should cut them off above the highest leaf-blade.

The station found that the pollen produced an acre of corn, the hills being $3\frac{1}{2}$ feet apart, and each hill having three stalks, contains about $2\frac{1}{4}$ pounds of nitrogen and next to no potash and phosphoric acid. I do not believe, as one of the stations states as "a well-known fact," that "the development of the floral organs is a great strain upon the plant." The strain of producing flowers is as nothing compared with that of producing seed. The lavishness with which nature produces flowers and pollen alone proves it to be an easy task; the small amount of plant-food found in pollen proves it. To sum up, I would say that this idea of removing tassels for the sake of increasing the yield of corn, is of next to no practical value to the every-day farmer.

COST OF PLANT-FOODS.—The following is a schedule of trade values adopted by experiments for 1892:

	Cts. per lb.
Nitrogen in ammonia salts.....	17½
“ “ nitrates.....	15
Organic nitrogen in dried and fine ground fish, meat and blood.....	16
Organic nitrogen in castor pomace and cotton-seed meal.....	15
Organic nitrogen in fine ground bone and tankage.....	15
Organic nitrogen in fine-medium bone and tankage.....	12
Organic nitrogen in medium bone and tankage.....	9½
Organic nitrogen in coarser bone and tankage.....	7½
Organic nitrogen in horn shavings, hair and coarse fish scrap.....	7
Phosphoric acid, soluble in water.....	7½
“ “ “ ammonium citrate.....	7½
Phosphoric acid, insoluble in dry ground fish, fine bone and tankage.....	7
Phosphoric acid, insoluble in fine-medium bone and tankage.....	5½
Phosphoric acid, insoluble in medium bone and tankage.....	4½
Phosphoric acid, insoluble in coarser bone and tankage.....	3

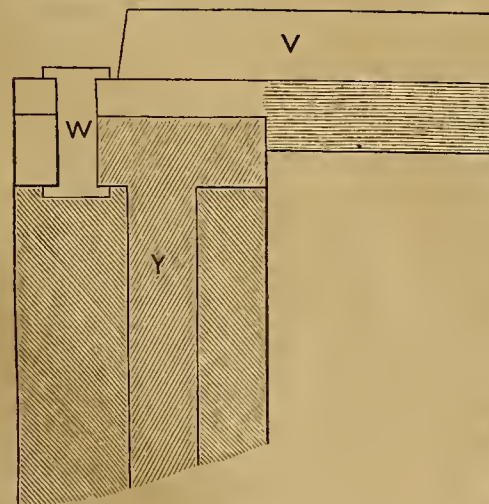


FIG. E.

Phosphoric acid, insoluble in complete fertilizers.....	2
Potash as high-grade sulphate, in forms free from muriates (or chlorides).....	5½
Potash as muriate.....	4½

It will be seen that values have slightly changed from last year's. The New Jersey station, however, thinks that this valuation is too high, and certainly it favors the manufacturers of commercial fertilizers. This station, in bulletin No. 88, gives a number of formulas for home mixtures, and states that their average cost was \$4.70 per ton, or 15 per cent less than their valuation. These are things which the manure buyers should study.

CO-OPERATIVE CREAMERY BUSINESS.

In last issue of FARM AND FIRESIDE I mentioned some of the advantages of co-operative dairy work when mixed with general farming. To that I desire to add that in no manner can large farms be kept in as constantly improving condition as they can when carrying quite a large stock of cattle, with onsilage and silos. Then the home manufacture of fertilizer soon assumes wonderful proportions.

If the majority of farmers will do this they can raise nearly as many acres of oats and wheat as they now do, because the same amount of corn ground will, if planted with the large ensilage corn and fitted for best cattle feed in the silo, make

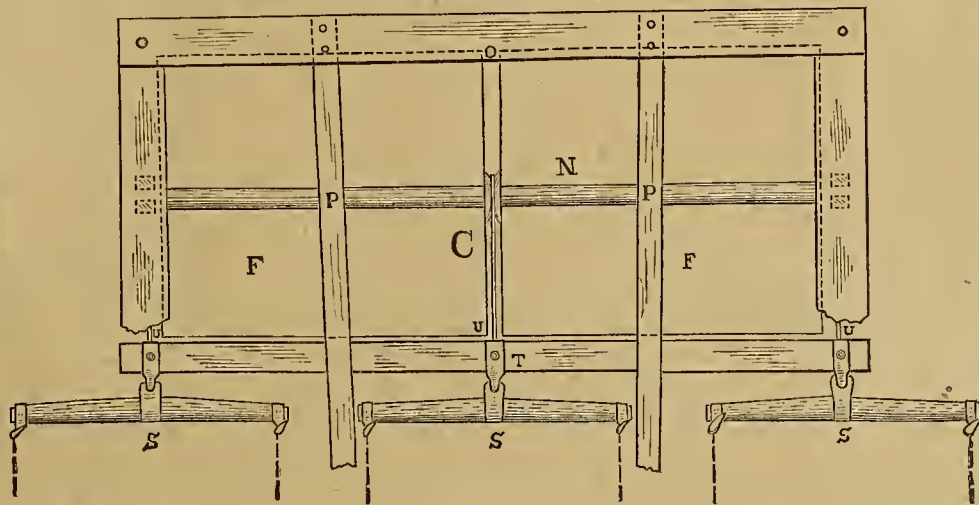


FIG. C.

it possible to increase the number of cattle kept upon the farm, and this will add very largely to the manure pile and enable the wheat, oat and meadow fields to be rapidly put in better condition, and yield heavier crops.

Since I have done my farm work in this manner, and kept forty head of cattle and several horses on a farm of one hundred and forty acres, it has enabled me to make fully three hundred loads of barn-yard manure annually. This I use largely on my wheat ground, top-dressing after it is plowed. It gives me an almost certain heavy crop of wheat and an excellent catch of clover. The ground is made so rich that it yields two tons or more per acre of clover hay, and gives a good second crop of clover for seed, pasture or hay. I always save mine for one of these purposes, because the clover from one year's growth will have the largest amount of root production it can make, and I plow it for my ensilage corn the following season.

I haul considerable manure in winter-time fresh from the stables, and put it upon this clover-sod ground to plow under for the corn crop. The large pile of manure is then better distributed and the work of getting it out upon the fields made easier by using it upon both corn and wheat. If the corn stubble is plowed under, it will furnish as rich a seed-bed for oats as they can stand upon, and with me, produce from sixty to eighty bushels per acre. I could not possibly raise as heavy oats in any other manner.

The oat-stubble ground we plow as soon as the crop can be harvested and removed from the field; then we roll down the furrows and pack it firm, and harrow, crush and roll the ground after we have spread our heavy coating of manure upon it. I have twenty loads per acre—sometimes more—for this purpose. Every few days we give the field another harrowing or crushing, fitting the seed-bed as finely as possible, and when the proper time comes for drilling, it is in excellent condition for the seeding of wheat.

Now, it would not be possible to secure this vast amount of fertilizer upon the farm except by help of the large dairy we keep. We feed, grow and sell some cattle because we do not desire to milk so many cows. Two hands can milk twenty cows, night and morning, and not interfere very much with the regular crop work of the farm. I can now grow more bushels of grain, more tons of hay per acre than I could twenty years ago upon this same farm, and produce the whole for less money per acre, and consequently less cost. In this way I make more money upon the farm, in spite of wicked legislation and all the everlasting causes for farmers grumbling that can be imagined.

Some men think these results are impossible, and one smart, scientific Aleck of this county, who has spent quite a

long life-time on sixty-four acres of land, doing nothing but general farming, and that all in the old way his dad did, thinks it is impossible to grow feed upon the farm in the manner and for the cost I stated in July 1st issue of FARM AND FIRESIDE. He fired his gun of antiquated scientific information at me last week, in the *Ohio Farmer*, but it does not alter facts. I stated only the truth as I gave it, and it is possible for a large majority of the farms in Ohio to equal or excel the results of mine. I know of many men who are doing better and working up nearer to the possibilities of the farm.

Mr. Cornelius Easthope, of Niles, Ohio, the famous Jersey cattle breeder, is keep-

ing over fifty head of Jersey cattle and several horses on sixty-five acres of land, by aid of silos and ensilage.

H. TALCOTT.

WATER IN AGRICULTURE.

As a general rule, farmers hardly realize the importance of water in the growing of crops. They know that a certain degree of moisture is necessary in order to secure the germination of seed; they also know that in the hot season a lack of rain, and consequently, a lack of moisture, suspends growth, if the crop is not actually injured. But because in the season for procuring hay, clear and dry weather is a desirable condition, the fact of the effect upon growing crops is largely overlooked. Then there is another point that gives occasion for less thought of the matter, and that is, in many sections of the country, during spring and fall, there is usually such an abundance of moisture that in some instances it is almost objectionable, whereby its great importance as an element of successful farming is less felt than in sections known as the arid regions, and where water is valued as an agent of success for all it is worth.

We are apt to value an article in proportion to its availability as well as its necessity. If an article for which there is a necessity is at hand at all times, it occupies little of the thought, even though it may be deficient for a short period, to which we get accustomed. And so it is with water in farming; because there are times when we feel that there is a superabundance, and a comparatively short period when there is a deficiency, we are in reality rendered insensible to the actual need when such occurs.

This becomes more noticeable in planting. Plant a crop in the spring as soon as the ground gets warm and when fully charged with moisture, and then wait and plant again in the same soil after it has become pretty dry, and the difference in coming up and vigor of subsequent growth is very marked.

Moisture is the medium whereby the food elements of the soil are conveyed to the growing plant, and without this the plant must linger in a condition of starvation; and that, too, at a period in reality the most important in a financial view of the question, because, as a rule, drouths come when the energies of the plants should be wholly devoted to seed production, when in many cases they are devoted to a very lively "struggle for existence."

The importance of drainage is felt and advocated, but while provision is made to remove the surplus of moisture in or upon the soil, little attention has been paid to the matter of supplying its deficiency, except in the sections where the deficiency covered a large portion of the entire season. Having observed some of the effects of irrigation in the arid regions in the production of crops of all kinds, we have been led to ponder upon what might be accomplished by a judicious and systematic use of water in any section of country whenever there occurred a demand for the same.

In many instances storage reservoirs might be made at little expense, and by

the use of windmills and drive-wells a fair supply of water could be secured and distributed as required. Water applied to small fruits, vegetables and grains would have the effect to increase both the quantity and quality, and especially favorable is its influence upon the hay crop. Of all the crops grown by the farmers there is none that suffers more for the want of moisture than the hay crop, and while the quantity of moisture should not be excessive, an abundance will greatly increase the yield and continue the growth of the aftermath immediately after the first crop is cut, when, as is frequently the case, the average season becomes so dry as to work damage to the roots of the grass deprived of the growing crop that served as a partial protection.

The subject of irrigation is one that farmers should consider, try on a small scale and then note the results.

Our western brethren realize its importance to them and wonder that we do not apply it to our necessities.

WM. H. YEOMANS.

FARM FENCES.

Fences are troublesome things in more than one sense. If the cost of all litigation that sprung from disputes about fences could be summed up, it would be found to be an enormous sum of money, wasted to the last penny.

Most men are independent, and are ready to assert their independence and maintain their rights. All honor to them, but there is a limit even to asserting, aggressively, one's independence. Everything is estimated by its money value, but really the money cost of litigation or fence disputes is the least cost.

Farmers have been estranged for life, would not be neighborly, would not speak, lived in bitterness and anger—all because they could not agree in regard to the building of a few rods of fence between their farms. And it did not end there. Their children grew up at variance with each other, with the memory of the "fence fight" ranking in their hearts for life.

Family feuds do not disturb the quiet of this country except in a part comparatively small, and yet fence feuds, while they have not come to the surface to disturb the public peace by acts of violence, have disturbed, if not distorted, the minds of many dwellers in peaceful, law-abiding communities who participated in them, not demonstratively, but in harboring and in clinging to the ill will they engendered. The following story has its moral:

A farmer bought a farm in a New England town. He was told that one of his neighbors, whose land adjoined, was a hard man "to get along with," and that he was particularly careless about keeping his part of the fence in repair. The new man, A, found this to be true. As soon as B's cows went to pasture in the spring they began to roam occasionally over A's land in consequence of defect in B's fences.

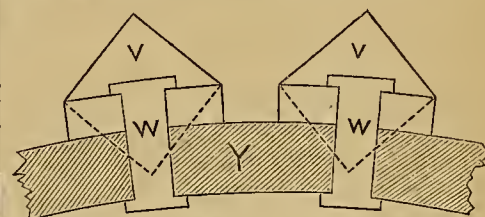


FIG. D.

A made a friendly visit to B and suggested a repair of fences. This was a sore point, evidently, with B, and he replied to the effect that he would mend his fences when he was ready, and if A was not satisfied with that he might rebuild them himself. Here was a chance to build up lasting enmity and hatred, but A preferred to build fence instead. He told his wife, "I'm not going to quarrel over a little fencing; it's cheaper to build it." And he built it.

Later in the season B's cows made another break into A's corn-field and laid a part in waste. A quietly drove out the cows and rebuilt another section of fence. The next day B walked into A's yard and held out his hand. His voice had lost its harshness and his eyes were moist. "I'm not accustomed to such treatment," he said; "when my cows broke into your corn I expected to be threatened with the law and called names. I'll show you that I can be a man, too. I'll pay for the fence you've built, and for all damage done by the cows, and hereafter you won't have any fault to find with fences." He kept his word and proved to be as good a neighbor as any one could wish.

GEO. APPLETON.



Emma Frederick.

Our Baby

Was a beauty, fair, plump and healthy. But when two years old Scrofula Humor spread over her head, neck and forehead down into her eyes, one great sore, itching and burning.

Hood's Sarsaparilla gave her new life and appetite. Then the humor subsided, the itching and burning ceased, and the sores entirely healed up. She is now perfectly well." I. W. FREDERICK, Danforth street, near Crescent ave., Cypress Hill, Brooklyn, N. Y.

HOOD'S PILLS cure all Liver Ills, biliousness, nausea, sick headache, indigestion.

Our Farm.

NOTES FROM THE HOME GARDEN.

BY JOSEPH.

SOME FLORAL DISPLAYS.—I do not often say much about flowers. This, however, is not because I do not appreciate them. I do like flowers, and am especially fond of fine annuals. They are so easily grown, and cost so little, the only outlay being for a few packets of seeds, that I think they ought to be found in abundance on every place, either in the regular border or in a corner of the kitchen garden. The girls, and the small boys too, will find and pet and pluck and appreciate them wherever they are or whether planted in fanciful designs, with different colors all distinct and separate, or in straight rows like vegetables, and the colors all mixed. In many cases this regular way and the use of the cheaper packets of mixed colors may be preferable. The least that should be done, and can be done by people even who must make every penny count, is to have a row or a clump of sweet-peas. These can be planted early, perhaps even in fall, in some out-of-the-way corner, held up by a trellis if in a straight row, or by a few sticks and strings if in clump. They grow and grow and bloom and bloom, and you can enjoy them all summer long. The rule is to plant the seeds deep, but I find it makes but little difference ordinarily whether you put them down six inches or only two. Have ground rich and mulch in hot, dry weather, or water them occasionally, and success will be assured.

Then there are the annual phloxes (*Phlox drummondii*) and the verbenas in all sorts of colors. All you have to do is to prepare a nice, rich bed in spring and sow a packet of mixed seed. They come up readily and grow and bloom all summer, and the seeds scattered one year will grow next season and give you another crop of bloom, and so forth *ad infinitum*. These annuals make a brilliant display when grown pretty thickly in masses. The plants may be from six to twelve inches apart each way. Larkspur and snapdragon are other old-fashioned favorites which are easily grown and satisfactory in bloom. Mignonette pleases us with its fragrance.

The California poppy (*Eschscholtzia*), begins to unfold its large, orange-colored flowers in early summer and makes a fine show. It reproduces itself from seed year after year on a spot where it was once grown. This is also the case with all poppies. Among them there are the delicate (single) Shirley poppies and the gorgeous, large, double sorts, like Fairy Blush, Mikado and many others. All these flowers are almost as easily grown as weeds. Then I might name the various pinks, like *Dianthus Chinensis*, *D. Heddenig*, *D. Diadematus*, etc., the crimson flax, *Lychnis elegans*, Lobelias and others. All these will give you fine and abundant flowers. But what a love of delicacy and modesty is the Nemophila, or grove-love. The plant is low-growing and covered from early summer with its chaste flowers in all shades of light blue, often peculiarly spotted and marked. This is a real beauty.

Among later-blooming and rather tender annuals we have the balsam and aster as particularly satisfactory. In fine display of forms and colors I do not know anything that could exceed the aster. It is at its best in late summer and fall; but it affords necessarily but a fleeting show. Frost soon puts an end to all this glory. Some of these newer sorts, the Crown asters, the Comet, Victoria, etc., are really wonderful in perfection of form and of delicate coloring. What a contrast to the original wild aster.

Of course we want Zinnias, stately plants with gorgeous bloom. They also are as easily grown as anything can be, and they make a brilliant show. The new Zebra strain, introduced a few years ago, is especially fine and striking.

Thus I might continue naming flowers worth having; but I will add only one more to my list, and it is one of the best and to me most satisfactory; namely, ten-weeks-stock. You can sow it early under glass and transplant while yet in seed-leaf to the open ground; or you can sow it outdoors, say in May, in rows or clumps, pulling out the single-flowering ones as soon as you can recognize them and keep-

ing only the double ones. They will begin to bloom in August (or earlier if started under glass) and charm you with their handsome bloom and delightful fragrance. A good-sized bed of them will fill the atmosphere of a whole neighborhood with sweet and pleasing odor. Four years ago I started some *Pyrethrum roseum* (Persian insect-powder plant) in hotbed and transplanted in open ground. They began to bloom the same season and have bloomed fully and freely every year since. For a little while in the spring they make a fine show, but after bloom is past the plants are by no means ornamental. For a really fine perennial, give me the Gaillardia, with its large, high-colored flowers. It remains in good shape all season long and produces flowers in ever-increasing numbers as the season advances. The Gaillardia can be justly recommended to all flower lovers.

Mr. Scott Morris, of Oregon, some years ago, while I lived in New Jersey, kindly sent me a few bulbs of the Washington lily (*Lilium Washingtonianum*), which grows wild in that state. I planted them, but did not succeed in blooming them, probably because I did not plant them deep enough. This year we had one specimen, planted a year or two ago twelve inches deep, in bloom. It is really a grand thing, with its strong, straight stalk bearing a glorious pyramid of flowers. Gray's lily (*Lilium Grayi*) resembles it somewhat in habit of growth, but the individual flowers of this are not so large nor fine.

PLANTING BULBS.—Let me remind my friends also that it is now about time to think of planting bulbs, or at least of purchasing them. We always appreciate a thing most when scarce, and at no time will we be apt to think more of nice flowers than in winter and early spring. Yet by planting a few bulbs, such as hyacinths, tulips, crocus, narcissus, Freesia and others, either for outdoor or house culture, we can easily secure the very choicest of flowers just at the most opportune time. There is no need of buying high-priced named bulbs. The ordinary mixed colors will do well enough for most people. By all means, procure all the bulbs you can afford. Plant them in a well-prepared bed or border outdoors for early spring flowering, setting the small bulbs only a few inches deep; the larger ones, like tulips and hyacinths, from four to six inches deep. And when you have done that be sure and start a few in pots or boxes for house use. Pot the hyacinths singly, in four or five inch pots, well drained by putting pieces of broken pot into the bottom of the pot, and upon this nice, clean loam containing very plenty of sand; pot firmly. Now don't set the pots with the bulbs into a light, warm room. If you do your plants will not amount to much. Take them into the cellar, or any cool, dark place, and leave them there until the pots are full of roots, and the plants in proper shape to push up strong flower stalks. Then bring them gradually to the light and warmth. If you want hyacinths in bloom by Christmas, pot the bulbs in September or early October and keep cool and dark until about the 10th of November; then bring to the light.

EXTRACTS FROM CORRESPONDENCE.

FROM ILLINOIS.—We have a pleasant country. Our wheat yielded from 15 to 40 bushels per acre, and oats from 20 to 45 bushels. Corn and potatoes look well. One railroad runs through Mascoutah. Land sells for from \$50 to \$80 an acre. H. S.

Mascoutah, Ill.

FROM ALABAMA.—A good market-garden at Bridgeport would pay immensely; also dairying, and next season probably more than this. Common wages are \$1 per day; board, \$4 per week. It is a solid, substantial place, with many mills and factories. Everything is built very substantially, mostly brick and stone for business blocks. An immense amount has been expended on the streets and sewers. Mills and factories are exempt from taxation. Coal is \$1.20 per ton at the yards. There are side tracks to everything, and great abundance of all kinds of material. There are good railroad facilities, and the Tennessee river for transportation. There are no saloons—water for all from a very large spring up on the mountain two and a half miles away. Nearly everybody keeps boarders. Rents are very high. Money is plenty, and there is a good demand for all kinds of produce. McMinville, Tenn. J. F. T.

FROM CALIFORNIA.—In your issue of May 15th I saw an article from Woodland, which is misleading. It is not a fair representation of the whole state, as California is a big state

and the description of one place does not fit all others. Here in the Sierra Nevada mountain valleys it is hard for ranchers to get steady men at \$30 and \$40 per month all the year around. They pay \$1.50 and \$2 per day in harvest, which lasts from one to two months. Generally, many men come up from the Sacramento valley, but they are what are termed "tramps" or "blauket men," as they carry their bedding along. Now, a good, respectable man rarely has to sleep out in barns or out-houses, but no one would want the blauket men to sleep in the house. These valleys—Sierra, Mohawk, Indian, American and many others—are inhabited by thrifty, well-to-do people, and there is room for good, industrious boys and men. W. T. M. Wash, Cal.

FROM SOUTHERN OREGON.—This season has been an unusual one here, as elsewhere. Wet and cold from April 10th to May 15th, dry and hot for most of the time since, has been the order of the weather here. The fruit crop, to a very great extent, succumbed to the cold; all kinds of fruit are scarce, and the old stock of dried fruit will be called for at good prices. The hay crop is above the average, while the yield of grain will fall below. The grain in sight is of fine quality. Potatoes are a flat failure, and those who have any to spare get two cents per pound very readily. Non-irrigated gardens are dead; irrigated ones are fine. The man who can irrigate is always in luck, as he controls the necessary element of moisture. Nature is always on hand here with heat during the summer months; our heat is not excessive, as one hundred degrees in the shade is exceptional, but as we have no cloudy or foggy weather, sufficient heat can always be relied on. I receive many letters (they are always welcome) inquiring about prune culture. The prune is a variety of plum, which when dried is the prune of commerce. The tree is very like the plum in habit and appearance; it is slightly more hardy than the peach, and requires the same culture. As it is not pitted, the crop is more cheaply dried and prepared for the market. It does best here on good foothill lands, as frost is not so likely to kill the young fruit as on very rich, low lands. There are many varieties of the fruit, and, like the Indian's whisky, "all are good, but some are better than others." It will be a long time before the prune business is overdone, and those who hesitate on that score need lose no sleep about future markets. The man furthest from market is the one who has nothing to sell. If you desire a lucrative fruit business, come west and plant Italian or French Petite prunes; take care of your trees, and Dame Fortune will smile her sweetest upon you. You need not seek land at \$100 to \$200 per acre near town to make a success of it; you can get good land twenty miles from town, which is often far better, for \$20 per acre. If you really want an orchard, you can take a claim on the remnant of Uncle Sam's domain; these remnants are few, however. If you are not gritty and determined, don't take a claim. If you want the earth, fenced and set in prunes, for "four bits," stay where you are; Oregon is full of that class. I have no land to sell and have no personal axe to grind; I am a "clod-hopper" like yourself, and write here what I have been called upon many times to write in answer to FARM AND FIRESIDE readers. The climate of Jackson county, Oregon, is the best on earth. We raise all except sub-tropical fruits. We have plenty of timber and water, fish and game, cattle and horses. Our roads are good when dry and bad when wet, like yours. S. M. Spikenard, Oregon.

FRUIT EVAPORATOR

THE ZIMMERMAN
The Standard Machine

Different sizes and prices. Illustrated Catalogue free.

THE BLYMYER IRON WORKS CO., Cincinnati, O.

Crimson or German Clover.

(Also called Scarlet Clover.)

A more valuable crop than this does not exist. As an improver of the soil, or for an early summer forage or hay crop it is unsurpassed. As a green manuring crop for GRAIN, COTTON or TRUCKING CROPS, it gives the very best results; while for improving poor land it has no equal. First introduced in Virginia fifteen years ago, since which time its growth has rapidly extended until now it is largely grown in nearly every State in the Union.

Circulars giving full information free. Price of New Crop Seed, \$6.00 per bushel of 60 lbs.

T. W. Wood & Sons,
Seedsmen, Richmond, Va.

Fall Circular giving full information on all Seeds for Fall sowing, ready August 15th. Mailed free. Send for it.

JONES ARE WHEATS LEADERS AND SEE OVER 1,000 CROSSBREDS ON TRIAL

Early Genesee Giant (hard amber.) A NEW WONDER IN WHEAT. From originator of Early White Leader and Jones' Winter Fife. Offered in 1892 only in 2 oz. sealed packets. Send for descriptive price list to A. N. Jones, Le Roy, Genesee Co., N. Y.

Mention this paper when you write.

CIDER
MACHINERY.
POWER SCREW
HYDRAULIC, OR
KNUCKLE JOINT
PRESS
Graters, Elevators, Etc.
Boomer & Boschert Press Co.
99 W. Water St., Syracuse, N. Y.
Mention this paper when you write.

CHASE'S 3 HORSE HEAD



HORSE BLANKETS

are the STRONGEST made.

CHASE'S PLUSH ROBES are the standard. Plush will not shed.

LOOK FOR NAME CHASE IN BINDING OR ON TAB IN ONE CORNER.

Mention this paper when you write.

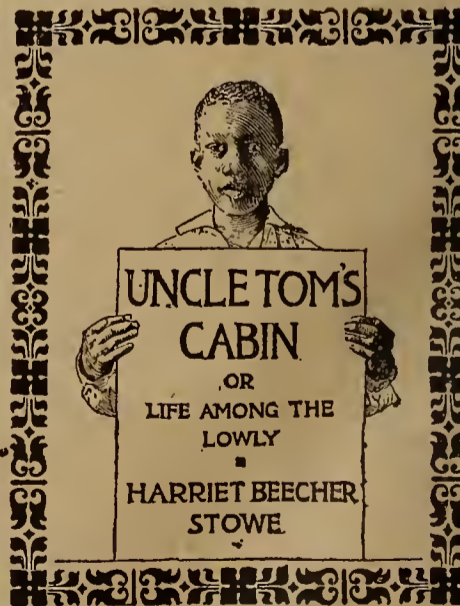
SAVE MONEY

\$100 Top Buggy,	\$55.00
\$125 Top Phaeton,	\$73.50
\$75 Spring Wagon,	\$44.00
\$50 Road Wagon,	\$29.00
\$15 Road Cart,	\$9.00
\$7.50 Single Harness,	\$4.25
\$25 Double Harness,	\$14.50
\$5 Morgan Tree Saddle,	\$2.25
\$16.50 Texas Saddle,	\$9.25

ALL GOODS FULLY WARRANTED and shipped anywhere to anyone at WHOLESALE prices with privilege of examination. Send at once for illustrated catalogue FREE. Address CASH BUYER'S UNION, 158 W. Van Buren St. B 16, Chicago, Ill.

WALL PAPERS

The most complete set of samples and instructions how to paper sent FREE. We have the largest and best selected stock in the U. S. It will pay you to see our samples before purchasing. CHAS. M. N. KILLEN, 614 & 616 So. 20th St. Phila.



Premium No. 837.

The fame of this book is so great that it has been printed in twenty-one different languages. It has been read by the high and low, rich and poor the world over and still retains its hold on popular favor, as it ever will. Its author, Mrs. Harriet Beecher Stowe, lived for many years among the scenes which she so feelingly and graphically describes. Her story, "Uncle Tom's Cabin," at once attracted the world's attention, and looking back at the system of which "Uncle Tom's Cabin" was at once a picture and a chief means of overthrowing, Northern and Southern writers recognize its truthfulness and vie with each other in praising the book, while its fame abroad is scarcely less than that which it possesses in the United States.

Given as a premium for two yearly subscribers to either the Farm and Fireside or the Ladies Home Companion. Price, including one year's subscription to either paper, 60 cents. We offer it for sale for 25 cents. Postage paid by us in each case. Address

FARM AND FIRESIDE,
Philadelphia, Pa., or Springfield, Ohio.

Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammonton, New Jersey.

THE FAMILY HOME MARKET.

If the markets are dull and prices low, the cheapest place to sell is at home. It pays to raise chickens for the family table. When poultry and eggs are consumed at home there are no transportation expenses, no coops for shipping required, no hauling to the depot, and no commissions to pay for selling. There is no reason why a farmer should pay fifteen cents, or more, for beef and sell his poultry for less, nor should he be content with pork and potatoes when he can have poultry on his table.

Poultry on the farmer's table is more wholesome, and a greater luxury, than the poultry on the tables of the consumers in the cities, as the supply sent to the city markets is not always of the best quality, much being consumed that is very inferior. The farmer can select the choicest and best for his use, and can have it in a fresh and wholesome condition.

The home market is the best and most important. The farmer should sell only the surplus, and not allow any poultry or eggs to be sent to the cities until after his own wants are supplied. It will be a saving in some other direction when poultry is used, and the family will enjoy the gathering around the table when the diet is more varied.

It is not advisable to overlook high prices. The farmer is wise to sell his poultry when he can get good prices. It is not proper, however, for a farmer to sell at a sacrifice when he can find a market on his own table. The home market is always the remedy for low prices. When there are one or two fat hens that do not lay, it will not pay to ship them, but it pays to eat them, and save the cost of their food. Young fowls that will not mature in time to lay before winter, and which take up room that the laying hens should have, will do more service if used on the table than if retained. The surplus should be reduced before winter, in order to save expenses.

WATER-TROUGHS.

The best water-troughs are of wood, the usual shape, and made to hold a bucketful of water. The trough should be placed under a tree, or in some shady place. The objection to fountains is the tedious work of filling them. Troughs become slimy after a while, but may easily be washed with soap-suds and an old broom. It costs but a small sum to make a trough, hence a new one should be made every year. The trough should be filled every morning, but should be rinsed well before filling.

TURNIPS FOR POULTRY.

A mess of turnips makes an excellent meal for poultry in the winter season, and especially for ducks and geese. They may

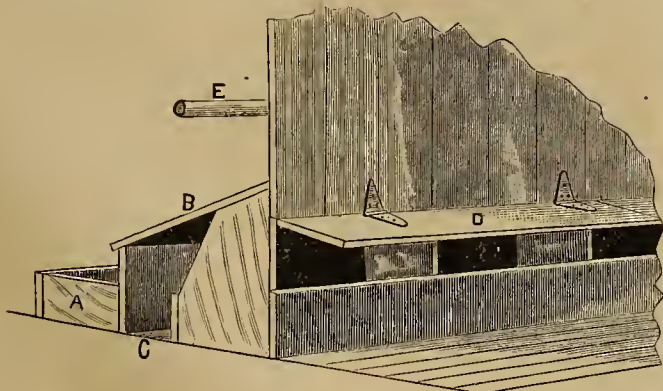


FIG. 2.

also be used during the fall. Add a small quantity of bran and ground oats to the turnips and give the hens all they will eat, as such food is bulky, and not so liable to fatten them quickly as is the case when grain is fed exclusively.

OVERSUPPLY IN MARKET.

At this season of the year, although the demand for poultry is greater than at any other time, the supply exceeds the demand, and prices, which should be high, are sometimes low. This is due to two causes, principally; one being that as the winter season approaches, farmers thin out

the number of their fowls in order to lessen the expense of keep during the unprofitable season of the year, and the other being that the cooler weather permits of poultry being shipped long distances with less risk of decomposition on the journey. The result is that the surplus is crowded into market within a few weeks. After the fall sets in prices will advance, as the surplus will have been consumed. The broilers will come in later, and for a few months will bring good prices.

DOUBLE POULTRY-HOUSE.

This house should not cost more than \$30, and is intended for two flocks of a dozen hens each, but it may be lengthened if desired. It is 16 feet long, 11 feet wide, 8 feet high in front and 4 feet at

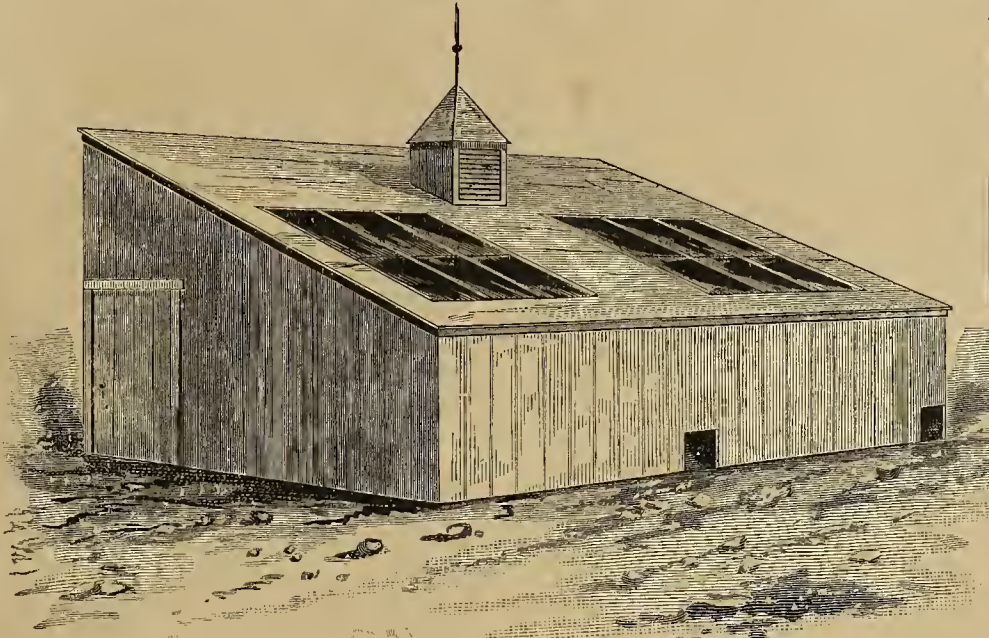


FIG. 1.

the rear. It is made of inch boards, battened on the outside and lined with tarred felt inside. The roof is of felt, covered with coal-tar or cement paint. A ventilator is in the centre. The sashes are 4 feet square. A passage way runs along the north side, 3 feet wide, and a lath fence divides the house into two apartments. The door may be in the center, in front, for two apartments, but for a long house it should be at the end.

Fig. 2 shows the interior, A being the box to hold the droppings, 12 inches wide and 6 inches high. B is the board for collecting the droppings when the fowls are on the roost. D is the box containing the nests, the fowls entering at the opening shown at C, and E is the roost. The interior plan is intended for a long house, but may also be applied to one of only two apartments.

EGGS IN SEPTEMBER.

As a rule the hens should not be expected to lay well in September, as it is the month in which they usually moult. A moulting hen seldom lays during the time she is shedding her feathers, but it is an advantage to have them get through with the process, as they will be full-fledged and ready for laying before December, when eggs will be higher in price. Feed a proportion of meat to hens every evening, about a pound, chopped fine, to twenty hens, and give each hen a teaspoonful of linseed meal once a day if they are moulting. The pullets that are not moulting should be in separate yards from the moulting hens.

DRESSED POULTRY.

September finds the markets full of poultry and prices low. Better prices may be obtained, however, by dressing the poultry shipped, which should be dry-picked. When fowls are shipped alive there is danger of loss by death, and from shrinkage on the journey. When dressed they can be packed in boxes or barrels, with ice, and sent by express. If the carcasses are of uniform appearance, and fat, better prices can always be secured, and the commissions and other expenses lessened. The appearance is a prime factor in selling.

When you have tried the free package of Frank Siddall's soap and found it saves you a large amount of labor, then tell your neighbors and friends to write us a postal for a free trial package, just as you did. We want to introduce it in every household. See page 7.

HEATED TERMS AND POULTRY.

The fowls suffer severely during the excessively warm days, and they may then be noticed to fluff up their feathers and pant. They require plenty of water, and also shade, or those that are fat will succumb to the heat. It is during the warm nights, however, that they suffer most, especially when closely crowded in a poultry-house that has been warmed during the day by the direct rays of the sun. The best places for the hens are open sheds in warm weather.

THE SCRATCHING HEN.

It is better to feed only once a day and compel the hens to scratch, than to feed two or three times a day and have the hens sit around and wait for you to bring

them their meals. It is the active hen, the one that scratches and works, that lays, and not the one that gets the most food. A litter of cut straw is the best place in which to put the grain, and the hens will be sure to find all of it.

FEEDING DUCKS AND GESE.

It should cost nothing at all now to feed ducks and geese. Both are excellent scavengers, and can find a meal on any location. On a field containing grass and young weeds, a flock of geese will become fat. Such weeds as purslane, pig-weeds and rag-weeds are luxuries to geese and ducks, especially when the weeds are young and tender.

CORRESPONDENCE.

PREVENTION OF GAGES.—I send you a preventive for gages in chickens that has worked well for me and may work well for others. My cabin is on low, damp ground, with grass all around it. In the year 1890 I bought eggs of Brown Leghorns and set one hen. She brought out eleven beautiful chicks, apparently very healthy. I fed good food, but made a mistake in letting the old hen loose early in the morning, for the little chicks soon got wet with dew, the result being that I lost all of them with gages. I could dislodge some of the worms by doubling a horse hair and inserting it in the chicks' windpipe and twisting it around several times. I thought I would raise no more chicks, but in the spring of 1891 I gathered up courage and set another hen. She brought out ten chicks and the tug of war commenced. To prevent gages I enclosed my old hen in a clean, dry coop. I kept her in until the chicks were about three weeks old, feeding them cracked corn and wheat, and giving them good, clean water to drink. At the end of three weeks I let the hen out about 9 o'clock in the morning, when the dew was gone and it was not rainy, and put her and the chicks in the coop before the evenings got chilly. I continued this way of handling until they were about three months old. I raised all, as none of them had the gages. This summer I am raising thirty chicks. They are over two months old, and no gages has made its appearance among them. Try this method and you will be well pleased. The chicks, when let out in the mornings, about 9 o'clock, when the sun shines, will take a delightful hop. Don't forget to feed them before you let them out of the coop. Rats destroy many young chicks. I have made a convenient and safe coop for young chicks. It is light, works well and costs but little, considering the advantage of securing the chicks from gages and rats.

A READER.

INQUIRIES ANSWERED.

Disease of Chicks.—Mrs. S. M. C., Sam's Valley, Oregon, writes: "There is a disease of my chicks which please explain. The head turns white first, they stand with the body almost erect, head thrown back, and just before they die some of them lose the use of their limbs, but at no time do they lose their appetite." **REPLY:**—The difficulty is probably due to

the ravages of the large gray lice on the skin of the head and neck. Anoint head with a few drops of sweet-oil or lard.

Plymouth Rocks.—S. E. S., Memphis, Tenn., writes: "Some of my Plymouth Rock pullets have a dark stripe on the front of their shanks. Does it indicate impurity?"

REPLY:—As a rule the pullets have the dark stripe when they are young, but it passes away as they mature.

Probably Exposure.—Mrs. J. B. R., Clinton, Ky., writes: "My chickens have fever, and drink much water. They sit around, are sleepy, their eyes become inflamed, give off a foul odor, and they become blind. They have a good appetite until blind, when they die. Their feet also become sealy and sore."

REPLY:—They probably have roup, due to exposure. If they have it at this season they will also probably have it in winter, and it is better to destroy them and begin with new stock, rather than to attempt to cure them, as it will be difficult and require much handling and vexation.

Brahmas.—S. L., Chicago, Ill., writes: "How many varieties of Brahmas now exist, and in the standard?"

REPLY:—Two—the Light Brahmas and the Dark Brahmas.

"Jiggers."—F. K., Cortland, Neb., writes: "1. What causes 'jiggers' in hens' nests? 2. How are they prevented or destroyed?"

REPLY:—The "jigger," or "chigger," is a very small insect, which annoys animals and birds. Their annoyance cannot be prevented, as they are usually very numerous, but it would not be out of place to try the kerosene emulsion, by spraying it in the poultry-house.

Corn-meal as Food for Chicks.—Mrs. F. O., Clyde, Mich., writes: "Is corn-meal, scalded, allowed to cool, and then mixed with other foods, such as boiled potatoes, good for ducklings and chicks? I lost ten ducklings, but do not know the cause."

REPLY:—There is no better food for both ducklings and chicks than scalded corn-meal and potatoes; but a variety of other food should also be given. Damp quarters at night will injure ducklings.

Which Breed?—W. P. S., Cincinnati, writes: "Which breed of chickens would you advise me to use? We have plenty of grass, and a large farm for them to run on. We have tried Plymouth Rocks and find them rather lazy."

REPLY:—The Leghorns would probably answer your purpose best.

Ducks.—H. J. C., Creston, Ind., writes: "Which is the largest breed of ducks? Also, its color and characteristics?"

REPLY:—The following are the weights of the drakes of different breeds: Aylesbury (white in color), 9 pounds; Rouen (varied color), 9 pounds; Pekin (white), 8 pounds; and also the Muscovy, 10 pounds, which are of two varieties, colored and white. The Pekins and Aylesburies are the best layers and the Rouens the best birds.

Pekin Ducks.—S. A. R., Chicago, Ill., writes: "Which breed of ducks is best for crossing with Pekins? I prefer a breed with white plumage, like the Pekin."

REPLY:—The Aylesbury would no doubt be the best selection for your purpose.

Toulouse Geese.—F. M., Oshkosh, Wis., writes: "Please give me the standard weight of Toulouse gander and goose."

REPLY:—The standard demands that the gander shall weigh 25 pounds and the goose 23 pounds.

Insect-powder.—S. E. R., Fort Smith, Ark., writes: "Can I use insect-powder in the poultry-house by mixing it with some substance, such as dry dirt?"

REPLY:—It can be so used—one pound of the powder with one peck of dirt, well mixed—but it is too expensive to be so used. The dry dirt should answer alone.

EVERY MOTHER

Should Have It In The House.

Dropped on Sugar, Children Love to take JOHNSON'S ANODYNE LINIMENT for Croup, Colds, Sore Throat, Tonsillitis, Croup, Croup, and Hoarseness. Summer Complaints, Cuts and Bruises like magic.

UNLIKE ANY OTHER For Internal and External Use.

JOHNSON'S Anodyne Liniment.

ORIGINATED IN 1810.

Soothing, Healing, Penetrating

Stops Pain, Croup, Inflammation in body or limb, like magic. Cures Croup, Asthma, Colds, Catarrh, Cholera, Morbus, Diarrhoea, Rheumatism, Neuralgia, Lame back, Stiff Joints and Strains. Illustrated Book free. Price post-paid, 35 cts. I. S. JOHNSON & CO., Boston, Mass.

Mention this paper when writing.

OVER 60 RELIABLE HATCHERS at Decatur, Ill., alone. Hundreds of testimonials. **NO BETTER incubator made.** Send 4c. for illustrated catalogue. Reliable Incubator & Brooder Co., Quincy, Ills.

Mention this paper when you write.

A ROAD WAGON \$32.00 To introduce our goods, we will give one of these elegant Road wagons to any one who will sell Six (6) for us. Regular price is \$65.00, we sell it for cash with order for \$32. If you are looking for a bargain in Vehicles or Harness send for our free catalogue. **FOSTER BUGGY & CART CO., 23 Pike Bld. Cincinnati, O.**

Mention this paper when you write.

DON'T BUY SCALES until you have seen the Illustrated Catalogue and Price List of **OSCOOD & CO., BINGHAMTON, N.Y.** **FREE** on application.

ILLUSTRATED LORD'S PRAYER AND TEN COMMANDMENTS

This is eminently a home picture. It is more than a mere ornament; it is an home and a text book combined. It contains more food for thought than many whole books. Each sentence, nay, each word contains hallowed suggestions from which whole volumes could be written. It is an elegant 10x12 inch Chromo Lithograph. Sample Copy 25c. Stamps taken. **CRUMB PUB. CO., Mayfair, Chicago.**

TWELVE COLORS AND GILT

Be sure to mention this paper when you write.

Our Fireside.

THE OLD HOME.

For many a year the gable glowed in the red of the passing day,
And the evening light on the old brick chimneys slowly died away.
There in the ancient attic, under the garment-hung beams,
Children dreamed, in the herb-scented air, no end of waking dreams
Of those who had sat in the high-back chairs, clad in comical things:
Of the plated shoe-buckles, the spinning-wheel, the fiddle devoid of strings;
As in the helmet, and crazy calash, and bonnets wonderfully made,
They danced about on the nut-strewn floor in half-frightened masquerade.

At night, snugly tucked in a trundle-bed, their sleepy eyes would rove
Where the moonlight glimmered on a warming-pan or revealed an old foot-stove.
No furnace then in the old meeting-house, and of foot-stoves there was need
For those who couldn't keep warm enough by hearing the Calvin creed.
And in the cedar-roofed garret they heard the sleet on the dormer pane,
Or listened in dreamy, lazy content to the whisper and patter of rain;
Then slept till they heard from the barn-yard the morning challenge shrill,
And the distant rooster's answers were drowned by the coffee-mill.

Below on the high, wide mantel, in festoonery quaint and old,
The tall and the short brass candlesticks were polished to look like gold;
There were the bright andirons, and the bellows florally gay,
And a glass-protected corner where the nice old blue china lay.
And the charming old lady in snow-white cap, with tender, tender eyes—
A boy's ideal of what one should be in relation to doughnuts and pies.
By the kitchen door stone does she not stand, just as we saw her then,
Pleasantly fondling a jealous cat and tossing crumbs to a hen.

The gate to the box-bordered garden clicked to with ball and chain;
Such fruit and such flowers as grew there can never be grown again.
There the feathery fennel flourished, by which grandmother set great store,
And the sunflowers turned in various ways, on the path from the gate to the door.
At the end of the gooseberry-walk was the orchard of ancient trees,
Where the orioles haunted the branches, and green apples dropped in the breeze.
Ah, me! It seemed that all must go on in just the accustomed way,
In the drowsy, lumblike stillness of the long-ago midsummer day.

—George E. Townsend.

MARGHERITA OF THE EAST SIDE.



THE Halahan children had matches, as usual, and had made a bonfire on the stairs, to put out which they employed a pail of water.

"Si," thought Margherita; "si sdruciolà; il tempo è oscuro"—it is slippery and dark.

And there was the man from the topmost room coming up. He ascended three steps, when the slipperiness did the rest. Margherita laughed.

Mrs. Halahan, on the first floor, came out. "Patsy Halahan, you'll never be a gentleman!" she screamed to nothing in particular, and re-entered her apartment.

The victim picked himself up, and carefully felt his way on the stairs.

Margherita, outside her door, met him face to face. She had seen him for a month, of evenings, as he went in and out, and he now and then nodded to her. The light from the room curiously irradiated her as she stood there, especially about the head.

"Madonna," murmured the man. His violin struck against the wall as he turned to look at her again.

"Un Tedesco," she thought—the same nationality as Herr Schwartz, the barber in the basement. While Mr. Halahan was from Ireland and in politics, her own father was Italian, and assisted a friend in the disbursement of liquid refreshment, gaining thereby a weekly stipend, a daily headache, and an hourly increasing admiration of bar-room patois, argot, slang; the rooms above theirs were occupied by an American woman named Smith, who never went out, and who in all seasons was making next winter's overcoats for Mr. Strauss—never this winter's—and whose perpetually active sewing-machine rather soothed Margherita as she lay in bed and tried to forget Venezia, and to think that her father had the right to bring her here, and to tell her a husband was waiting for her in Giuseppe,

who was connected with the newspaper *Il Segreto*, and had small, narrow eyes, and smoothed her hair, and made her frown. She had liked music over home, and there was one gondolier whose voice made her think of heaven; but here she hated it, and would grit her teeth when it came up to her from the street, this music of the new home. That was until a month ago. A month ago, sauntering out in the entry to see Patsy Halahan strike his matches and hurn Mary Aloysius Halahan, she was conscious of a strangeness. All at once she had left the tall, east-side house and was at home—home with those she loved since her mother died and her father sailed over the sea and became an Americano. It was the wail of a violin, making no tune that was familiar to her, but played by a hand that drew from it a universal sympathy. It was in the topmost room. Always after that she was on the landing when the violinista went out or came in. She was glad to-night, when he had slipped on the stairs, that his violin had not broken. He went on to his room, and she stood there looking after him.

"Dago!" yelled Mary Aloysius Halahan, as she ran up for a game of tag on the roof before retiring for the night.

Margherita went in and sat at the window. Below and above flapped white sheets, and ghastly garments slid out from casements on lines fastened to tall poles like masts of ships. By leaning a little she could see between the American woman's wash and find a little strip of heaven, in which there shone one bright star.

The sausage for supper was on the table, the macaroni bubbling on the stove. Beppo, the monkey Giuseppe had given her to cure her of nostalgia, was picking the hearts from some grains of corn; the statue of St. Joseph, with a bunch of lilies like diving-bells growing on a telegraph-pole, was on its bracket, which had a little founce of lace. Giuseppe had given her the statue because Joseph was his patron saint.

A monkey and a plaster of Paris saint to cure her of homesickness! She looked at Joseph, and his little flat, painted eyes reminded her of Giuseppe's; she looked at Beppo, and his greed, his restless head, reminded her of Giuseppe.

"Mary Aloysius Halahan," screamed Mrs. Halahan, "if you fall off o' that roof, I'll let you know it. You'll never be a lady."

Frau Schwartz, in the basement, had sauerkraut for supper, and the odor of that and other people's cooking edibles permeated the house.

Venezia! Venezia! How it must be over there now, with Tessa and Bettina, her little cousins who loved her so! Anima mia! Was that the singing of the gondolier whose voice made her think of heaven? Nay; it was the violin in the topmost room.

How strange he had looked when he came up after his tumble. She arose and opened the door wider. What a face the man had, with eyes as blue as Venetian skies, a look in them that made her think of Tessa and Bettina when they clung to her the day she went away from them.

She slid down to the floor, her hands clasped tightly, and looked up to the bright star in the strip of sky. Then she heard the padre's footfall, and she leaped to her feet. Beppo began to scream, and climbed to the frame of a lithograph of a distillery which the padre had brought home to brighten up the room. The padre came in with his much English, which he spoke to Margherita; not a word of Italian from him or Giuseppe, for she must learn the language of her new country.

"Grub!" he said. "And get a move on you." "Muove," smiled Margherita, the ineradicable hand language of her fatherland informing her more than did the uttered sound.

"The Dutchman's fiddle!" went on her father, apostrophizing the music in the topmost room. "He's a little German band; he was outside the saloon last night. Give the monkey a feed."

"Scimia, scimia!" called Margherita. "Scimia!" snarled her father. "Say monkey."

"Monk—monka," smiled Margherita; "che mangerete?"

"No!" thundered her father. "Say, 'Get out of the grub.'"

"Monka—gruba," said Margherita; and up in the topmost room the violin sang its exquisite pain.

The violinist, how young he was—almost a boy; his face white and thin, his eyes as Margherita thought them.

His instrument under his chin, he played the song that has touched more than Margherita—even Schumann's "Widmung." "A toi—à my love, to my love!" it sang. And the player had no supper, and would have none, music not having proved remunerative in the early evening, before the busy people had time to be sentimental. Night might be better. He wanted only enough food to keep away that awful pang of hunger, and—"Widmung" was played once more. Then the violin was laid aside, and the player threw himself across the bed in the chilly room and slept for very weariness. Had he not paced the room all last night and many a night before? The moon looked in at him through the curtainless window and made strange, moving shadows in the room.

Mary Aloysius Halahan playing tag on the roof made him dream of a noise—a pistol-

shot. He woke with heads of perspiration on his forehead. He blew his breath on his cold fingers and caught up his violin to go out to the streets. First, though, he took a little, flat package from his pocket and pressed it to his lips. "Ich liebe dich, Bertha!" he said.

Margherita heard him coming down. Her father had gone away, as usual, and would not be in till late. Giuseppe would come to see her this evening, so the padre had made her put on a bright ribbon, as though the amber heads were not sufficient ornamentation. She looked up as the violinista came down the stairs.

"Madonna!" he said. A faint sickness came over him as he thought of the pitying mother up there in heaven. What had he to do with heaven—he who had usurped divine power over in Germany? "Madonna!"

Margherita knew that he could not speak to her so that she could understand; no one spoke to her thus in these days of unintermittent silence, amid jarring sound; but she smiled. "Violino, amico," she said, making an inward gesture with her hands.

He bowed, and went on down the stairs, meeting a small, dark-faced man with eyes that made him think of things that sting. This was Giuseppe coming to see Margherita, hearing with him a copy of *Il Segreto*, in which was an account, written by himself, of an outrage by American laborers upon their Italian fellow-workmen, and calling upon the Italian government to make it an international affair.

"Maggie," he said, "are you standing there waiting for me? You are there every evening, on the landing."

He stroked her hair, and she wriggled away from him into the living-room, and kept Beppo in her arms while the visit lasted.

Cielo! How beautiful she was to-night—those eyes of hers great wells of brown light. Surely, she looked twenty, rather than sixteen. And Giuseppe's eyes were narrower than ever as he regarded her.

"Maggie," he said, and she thought his pink tongue was sharp as it moistened his lips, "sit close to me while I read to you *Il Segreto*."

"Non," she said; "non posso capirlo."

So Giuseppe, resolving to seek her father that very night and tell him how she kept him off, read his article, and with a curt good-night, left her.

Then Margherita took down St. Joseph and let Beppo play with him.

She was asleep when her father and his headache reached home. Il padre went to her room and looked down at her. There was a tear on her cheek not yet dry. She looked as her mother had looked in the old days of sunshine and never-to-be-forgotten youth.

"Jo's a beat," the padre contented himself to say, and sought his own couch.

But Margherita had rested poorly ever since her arrival in the new world, so that she was awake when the violinista came in, and she heard him toiling up the stairs. She was awake when the American woman lighted her lamp and began on Mr. Strauss' next winter's overcoats. She was awake when Mrs. Halahan called out: "Mary Aloysius Halahan, go and get two cents' worth o' milk. Patsy Halahan, where are you at? Did you get that bread?"

This day Margherita put on her bright ribbon and waited to hear the violin. When she heard it, she failed to think of Tessa and Bettina. The music startled her. She did not know that the violin voiced a despair, that his song was "Ich grolle nicht," into which he put all his own energy of agonized repression. Margherita had never heard anything like this. She thought of Giuseppe, and how he had tried to have her sit close to him last night. She hated Giuseppe. And that music! She opened the door. She would creep nearer to the music, as to something that cared for her, understood her.

She softly ascended the stairs. The topmost room was open. The violinist, a great blaze of fever in his face, sat on the side of the bed, playing the wild tune. His eyes were like glass with fire back of it.

He did not notice Margherita in the doorway. But she saw that he was ill. On the bed beside him rested a little, thin packet; his eyes were upon it while he made his music. She looked closer, and saw that it was a small photograph.

All at once the violin fell from his hand and rattled to the floor as he fell over upon the bed. Margherita thought of death. Then she had flown down to her father's room for a bottle of Chianti, and was up in the topmost room again. The young man had not moved; he lay there motionless, that fire in his face, his hand closed over the photograph.

She broke the neck of the wine-bottle, got a tin cup and filled it, and put it to the man's lips, and forced the liquor down his throat. The red in his face became purple.

She unloosed his fingers, and took the picture into her own hands. It was that of a fair maiden. There was a line of writing on the back of the card, together with a piece of printed matter pasted there. She looked at the woman's face; the rest was a dead letter to her. She felt her own cheek grow a little warm. Then she laughed.

"La sorella," she said; "la sorella." It was his sister, that was all; he was too young for anything else. All the same, she carried the picture down-stairs with her, and carefully studied the pretty face.

She knew that the young man was in his room all that day.

In the evening, contrary to precedent, her father remained at home. This alarmed her. He had stayed home the night he told her she should never leave the apartment unless he were with her; he had stayed home the night he told her if she cried any more because Giuseppe loved her, she should be starved.

"Jo's coming," he said to-night. "He's been chinning to me all day. You'll be married next week."

She did not understand his words, but his face told her something that made her think of the other two nights when he had stayed at home.

Then Giuseppe came—Giuseppe, who had viewed her beauty the night before in quite a new manner, and who had complained again to her father of her bearing toward him.

Beppo bit him when he came in, and he aimed a blow at the little beast. Margherita interfered, and he kissed her. The violin was singing up-stairs. Crimson with shame at Giuseppe's embrace, her indignation only making the padre and Giuseppe laugh, she darted out into the hall. Giuseppe made a feint of running after her to kiss her again.

Up the stairs she flew, scarcely knowing what she did, save that she fled for protection. The violinist's door was open.

He saw her this time—the Madonna face.

"Ich liebe dich, Bertha," he said, and held out his hands supplicatingly, the violin in one, the bow in the other.

She knew no language save her own, but she saw love in his face. She ran to him, and he folded his arms about her, crying out with exceeding gladness.

She liberated herself, thrilled, yet timid.

He went around the room, playing the violin, looking for something.

She knew what he looked for—the picture of his sister.

She ran down the stairs to get it, forgetting the padre, Giuseppe and all, vibrating with a new feeling as she was, that deep violin music wrapping her in its spell.

She found her father and Giuseppe looking at the picture she had left on the table.

"It has 'Ich liebe dich, Bertha,' written on it in a woman's hand," Giuseppe was saying.

"But the printed German?" asked the padre.

Giuseppe read that, and uttered an exclamation.

"A big reward for a murderer," he said. "A student, nineteen years old, five feet six inches in height, light hair, blue eyes; a scar on the forehead under the hair, made by a bullet from the pistol of the policeman he escaped from; a fine player of the violin. He killed the man who eloped with his sweetheart."

Then Margherita was on them, had snatched the picture from Giuseppe's hand and vanished.

"Margherita!" called her father. But she had gone to the violinist. With a glad cry he took the picture from her.

"Madonna!" he said—the queen of heaven, who intercedes for the granting of the wishes of sinful humanity—"Madonna!"

She understood that word, and it made her happy. "Madonna, my Lady!"

"Margherita!" called her father.

"Mio caro!" she said; "mio caro!" Then her father and Giuseppe were in the room.

"Margherita!" said her father, with a black frown. "To your room! Vostra camera!"

"Now I can account for the way she has treated me," Giuseppe said, in a still voice; "now I know why she is so much on the landing." He went to the young German, and raised a curl of the light hair that fell over his forehead. "See the scar!"

"A reward, did you say?" asked the padre. "Ah, here is one of my Chiauti bottles, Margherita!"

"Take her away," said Giuseppe, in that still voice. "I will go to the police. The man is a lunatic!" For the German was feasting his eyes on the photograph, unheeding them.

Down in their own apartment Margherita raised her eyes defiantly to her father's. He raised his hand and let it fall upon her face, once, twice, and a hot streak came out on her cheek. But she never wavered, and her eyes still defied him. He locked her in the room till he went up and turned the key in the door of the topmost room from the outside. Then he came down to his daughter again. She still had that look in her eyes. He called her a name that made a heat all over her, and struck her the third time. She could hear the violin singing "Widmung;" it was singing from her heart, she thought. Her father went outside when he heard Giuseppe returning.

"We will have to wait till to-morrow," said Giuseppe. "Keep his door locked. And Margherita must be mine now or never."

"To-morrow," said the padre.

"Shall I see her to-night?" asked Giuseppe.

The Best Dressing

to preserve
the fullness, beauty,
and color of
the hair
is

Ayer's Hair Vigor

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.

"To-morrow," said the padre. "She is my daughter till then."

Then the two men went away, leaving Margherita to her thoughts.

The Halahan children were shouting with merriment; she could smell the smoke from their bonfire. The American woman's sewing-machine whirled. She knelt to pray.

"Madonna!" she murmured. "Madonna!"

She had knelt before St. Joseph ever since Giuseppe had given her the figure. She knelt there now; but with a cry she started to her feet, tore down the statue and put her foot on it, grinding and grinding her heel upon it till it was a mass of white dust and fragments of clay. Then she knelt at the window, her face raised to the narrow sky.

"Sancta Maria!" she said; then lowered her head. "Madonna! Madonna!"

Kneeling there, her head upon the window-sill, she slept. She dreamed. There was music—"Widmung"—and blue eyes looking into hers, and a voice all trembling with passion, saying: "Ich liebe dich—ich liebe dich!" till she must think the words meant more than words ever meant before. Then in her dream a wall rose before her, dense and awful, with a heat that made the brain reel. Air! She could not breathe. Was that Beppo chattering? A grinding sound, and she awoke—awoke in smoke and suffocation. The Halahan children and their matches had done it at last. Dazed, bewildered, she knew not where she was, while the crackling outside scared her. Beppo was rushing around her, jabbering and hissing.

"Padre, padre!" she cried. She ran to the door. It was locked. Oh, padre, padre! Here is little Margherita, and she fears. Oh, Bettina! Tessa!

Suddenly, a sweet, piercing tone reached her—a violin playing "Widmung." She was stilled at once. She opened the window and put Beppo on the sill, and saw him disappear in the darkness. There was a heavy chair in the room. She raised it and smote upon the door. The third time, and the thin paneling gave way, and she was out on the landing, where there was nothing but rolling smoke spangled with bright cinders.

Up the stairs that trembled and throbbed under her, up to the topmost room, guided by the voice of the violin, she ran. That door was locked, too. She did not know that her father had the key. She pounded upon the wood. "Margherita!" she called. "Margherita!"

And the violin sang "Widmung."

Her voice took on the melody she heard. She thought of the words that must mean more than any other words, though she did not know their meaning. "Ich liebe dich!" she sang. "Ich liebe dich! Bertha! Bertha! Bertha! Mio caro!"

There was a scream in the room, a pulling at the door; then a smiting, a crashing, and the violinist was beside her, wild-eyed, fierce, his lips parted, breathless.

"Bertha!" he shouted. "Bertha!"

Margherita caught him to her. She would save him. He was weak, but she was strong with life.

"Mio caro!"

Then she heard her name from the blackness and the eating fire.

"Margherita! Where is Margherita!" Giuseppe was shouting. Then he saw the two lighted up by a flare as the flames broke through, and his eyes were like two thread-like slits. Margherita had her arms wound around the man who had supplanted him.

"Mio caro!" said Margherita.

There came that into Giuseppe's face that made the violinist push her from him and grapple with the Italian. But Giuseppe was the stronger, and he dragged the other to the stairs.

"Now as well as to-morrow," he snarled. "Murderer! Murderer!" His hands were at the German's throat.

Margherita sprang at them, and Giuseppe, releasing the man, raised his hand, and she saw the glitter of steel in it.

"Now as well as to-morrow," he said, and plunged toward her to strike, when, with a bound, the young German had caught the hand and dragged at Giuseppe; and there was a crash, and Margherita stood there alone, a yawning abyss at her feet, where the stairs had gone down, carrying the men into the raging fire below.

A sweet-faced sister leaned over Margherita when she opened her eyes in the hospital. "You are sadly burned, dear," she said. "Your father has been here, and Father Piozzi, but you did not know them. Ah, you do not understand me?"

But Margherita was clinging to her. "Madonna!" she was saying; "Madonna! Ich liebe dich—ich liebe dich!"

For she heard the violin, heard "Widmung," as though very far away; she saw blue eyes looking into hers, and arms stretched out to hold her.

"Ich liebe dich!" she said, more faintly; "ich liebe dich!" and "Tessa! Bettina!"

And the sister placed a little crucifix in her hand, and held her till her pretty head fell over and she was still. And the sister was weeping.—Robert C. V. Meyers, in Harper's Weekly.

See in our offer on page 15 how you can secure the beautiful picture, "Columbus at the Royal Court of Spain," in a rich, heavy, 6-inch gold frame, for only \$2.50.

PICKING THE TEETH AT TABLE.

The practice of serving toothpicks as a course is no longer observed in polite society. Neither are they used as a sideboard decoration and a centerpiece for the table. Neither are they served along with after-dinner coffee, and it is not polite to pick the teeth at the table; it is rather the act of a scavenger, even if the face and mouth are covered by a napkin, as some people seem to think is correct. Really, refined people suffer pain rather than to pick their teeth at the table.

A person might as well brush the teeth at the meal, and it would be quite as agreeable a diversion. The toothpick is properly an article of toilet, and for the bath-room and dressing-room, and not for the dining-room. People do not clean their nails at the table, which would be far more preferable than the opening of cavernous mouths. The time has already come when something should be said about this disgusting toothpick fad. Better go to the dentist and have the holes plugged up with gold and cement instead of prying meat out with a toothpick.

ONE WAY TO KEEP BURGLARS OFF.

I had gone to spend a few days with a friend in the country, and woman-like, we sat up rather late the first evening, talking. The servants had retired to the upper regions, and just as we were about to separate, I was surprised to see my friend take up two large newspapers, with the remark: "I must go and set my burglar alarm for the night." Wondering what the papers could have to do with it, I followed her and watched her spread one on the stairs and another across the hall floor.

"Now we can sleep in peace; no one could either jump over or walk over those newspapers without making a noise, nor could they even attempt to fold them up without rousing the house. It may not seem a very safe trap, but when everything is still the crisp rustle of paper is quite sufficient to awaken me. I have shut up the cat, so that there can be no false alarm," she concluded, and after having walked two or three times across the newspapers I was quite satisfied that the idea was not half bad.—St. Louis Chronicle.

HOW TO TRAIN CHILDREN.

Be very vigilant over thy child in the April of his understanding, lest the frosts of May nip his blossoms. While he is a tender twig, straighten him; whilst he is a new vessel, season him; such as thou makest him, such commonly shalt thou find him. Let his first lesson be obedience, and the second shall be what thou wilt. Give him education in good letters, to the utmost of thy ability and his capacity. Season his youth with the love of his Creator, and make the fear of his God the beginning of his knowledge. If he have an active spirit, rather rectify than curb it; but reckon idleness among his chiefest faults. As his judgment ripens, observe his inclination and tender him a calling that shall not cross it. Forced marriages and callings seldom prosper. Show him both the mow and the plow, and prepare him as well for the danger of the skirmish as possess him with the honor of the prize.—Quarles.

HOUSE WORK AS AN EXERCISE.

To keep the complexion and spirits good, to preserve grace, strength and agility of motion, there is no gymnasium so valuable, no exercise more beneficent in result than sweeping, dusting, making beds, washing dishes and the polishing of brass and silver. One year of such muscular effort within doors, together with regular exercise in open air, will do more for a woman's complexion than all the lotions and pomades that were ever invented. Perhaps the reason why house work does so much more for women than games, is the fact that exercise, which is immediately productive, cheers the spirit. It gives women courage to go on living, and makes things seem really worth while.—Medical Record.

BILL NYE ON WAGON ROADS.

Our wagon roads throughout the country are generally a disgrace to civilization, and before we undertake to supply Jaeger underwear and sealskin-covered Bibles with flexible backs to the African, it might be well to put a few dollars into the relief of galled and broken-down horses that have lost their health on our miserable highways.

The country system, as I recall it, was in my boyhood about as poor and inefficient as it could well be. Each township was divided up into road districts, and each road district was presided over by an overseer of highways, whose duty it is to collect so many days' work or so many dollars from each taxpayer in the district. Of course, no taxpayer would pay a dollar when he could come and make mud pies on their road all day, and visit and gossip with the neighbors, and save his dollar, too.

The result seemed to be that the work done was misdirected and generally an injury to the road. With all due respect to the farmer, I will state right here that he does not know how to make roads. An all-wise Providence never intended that he should know. The professional road-builder, with the money used by the ignorant sapheads and self-made road architects, would in a few years make roads in the United States over which two or three times the present-sized load could be easily drawn, and the dumb beasts of the republic would rise up and call us blessed for doing it.—Good Roads.

SOAP GIVEN AWAY

WHAT KIND

HOW MUCH

WHAT IT DOES

HOW TO USE IT

WHY IT IS FREE

HOW TO GET IT

Frank Siddall's soap—which is guaranteed to cut down the labor on wash-day so that a delicate woman or young girl can do a large wash without being tired. There is no need for women to injure their health by washing the old way.

A trial package large enough to do a very large washing if used according to directions. Every woman in the country may send and get the trial package **FREE**, but after that she must pay for what she wants if it suits her.

It does away with the wash-boiler nuisance and makes the clothes clean, sweet and white without boiling or scalding and without injury to the most delicate fabric. You must have soap, and this soap more than pays for itself by saving a large amount of fuel. It washes as well in hard water as in soft.

First—Put the clothes in a tub of warm water, rub the soap on them one by one and let them lie in the water for at least 20 minutes.

Second—After they have soaked the 20 minutes, rub out on the wash-board in the usual manner and the dirt will be found to **actually drop out** with less than half the usual rubbing.

Third—Rub them lightly on the wash-board through a clean rinse water—*this will take out the dirty suds.* (No other rinsing to be done.)

Fourth—Then put them through a Blue water and hang up to dry **without Boiling or Scalding a Single Article**, no matter how soiled some of them may have been.

We want the women to learn this easy way of washing clothes, and we are sure that if you will let your wash-boiler stay in the closet next wash-day, and give one fair, honest trial of this easy way of washing, that you will never go back to the old, hard, slavish way.

Make the following promises and a trial package will be delivered to you by mail, absolutely free. No attention will be paid to requests for soap where the promises are not made. It costs Mr. Siddall 30 cents for each package sent out, and he can only afford it when one package converts two families, as it is sure to do this way.

Write a postal card like this, filling in the blanks with your name and post-office address, and also your neighbor's name.

I promise to use Frank Siddall's soap, if sent free, on the whole of my family wash, **EXACTLY BY THE DIRECTIONS**, the first wash-day after I receive it.

Name.....

Post-office.....

County State.....

My neighbor, Mrs.....has promised that she will come and see the washing done.

Just think! Clothes washed clean, sweet and white in **LUKE-WARM WATER** and hung out to dry **WITHOUT BOILING** or **SCALDING** a single piece! Heat the washwater in a **TEA-KETTLE** and follow every little direction. Tell all your neighbors and friends to send to us a postal filled out as above for it. It will cost them nothing provided they make the promises.

In order that our subscribers may know that this offer is genuine, and because we want the women to learn this easy way of washing, we have agreed that the postals may be sent to us, and we will see that the soap is sent just as promised, and hope that many thousands of our subscribers will avail themselves of this generous offer at once.

Write your postal card as above and address it to

Publishers **FARM AND FIRESIDE**,
Springfield, Ohio.

Our Household.

ELEANORE.

You are perfect, you're divine,
Eleanore;
And your loyal heart is mine
To the core;
As the robin's song in May
Is your prattle when at play,
And I love you every day
More and more.

It was from the heart of June,
Eleanore,
That the shallop of the moon
Lightly bore
You across the harbor-bar,
And a night-bird sang afar,
And from heaven there fell a star,
Eleanore.

And a flower of June—a rose—
Eleanore,
Did a single bud uncloze,
Though it bore
Ne'er a blossom, till the morn
Of the day that you were born
Gave a crown unto its thorn,
Eleanore.

In the azure and the gold,
Eleanore,
Of your eye and hair is told
O'er and o'er
Your life voyage I surmise,
Where from bluest seas and skies
Golden suns will sink and rise,
Eleanore.

May the blossom of your heart,
Eleanore,
Be a rose whose petals part
But to pour
Sweets of love; and, if there be
Tears as well as smiles for thee,
May they be the dew that He
Doth restore.

So a kiss before you go,
Eleanore,
(Reaching up to me tip-toe
From the floor,
With the gold around your head,
And your dimpled cheeks so red);
There—be off with you to bed,
Eleanore.

—Charles Henry Luders.

TALKS WITH HOUSEKEEPERS.

CHRISTIE IRVING.

*Don't talk to me of odors fine,
Don't talk of music sweet;
Don't talk—in fact, don't talk at all,
But give me something good to eat.*

I HAD one girl who used to say I had cooking utensils enough to set up a tinshop, and when she got the kitchen fixed to suit her, we looked as if we'd had a fire. She had been used to the fewest possible things to work with—had even been put to the length of taking a slat out of the bed to iron shirt-bosoms upon—so it was no wonder some of my conveniences rather embarrassed her, as she didn't know what half of them were for, and so had no use for them.

It would cause a visible snile upon the face of many experienced old housekeepers to hear of the back-breaking failure I made in my early housekeeping days of such comparatively easy matters as making gravy or mashing potatoes, until I



EGG-POACHER.

made those dishes standard ones on wash-day, when it was my turn to get dinner, being determined I would serve up something different from a gray, lumpy, tasteless mass as my mashed potatoes usually were, or the thick, lumpy stuff I managed to perpetrate on the family as gravy. I can laugh with you now; I couldn't then, for I was certain the evil one sent to me on Monday all the imps who were not worn out with their Sunday work.

My poached eggs generally ended up in scramble. I could watch the cook drop

them in the hot water so deftly, and lift them out looking like opals, but when I would try it, ah, how differently they would act! till I thought each egg had the forerunning disposition of the chicken it would have been. I never succeeded with them so well as since I found the poacher herewith illustrated, and now my dish of poached eggs on toast, garnished with parsley, looks very appetizing.

*And if it is not things to eat,
O'er something else I tear my hair;
The one on earth that's worse than all,
Tell me of something new to wear.*

Life is hardly worth living now if you can't have a silk petticoat. Most ladies can furnish up an old-style black silk skirt and make it do very well for a while, but let me whisper to you, that just as soon as you take it for a skirt it will begin to go into slits all over. However, the top can then be made to do, perhaps, by adding a deep ruffle, like our model, which is faced at the bottom and top with scarlet and trimmed with black insertion over scarlet ribbon. For this winter's wear the very greatest favorite is to be a scarlet silk petticoat trimmed with a narrow band of black fur. This color goes well with the dark dresses, and just enough touch of color to look well. Of course, for older ladies something quiet will be more suitable. The gored waistband is a very comfortable arrangement to do away with wearing so many bands. To this can be attached the drawers and garter suspenders.

Some ladies use black China silk for winter drawers, as it is enough over the underwear, and it launders beautifully. Being slippery, the clothing gives over it, making walking much easier, and not wearing at the knees, as cotton flannel does, which is because it is too stiff to slip.

The model given for a little girl's school dress is very simple of construction, the waist from the yoke down and the skirt being in one piece.

Scarlet will be a very prominent color this fall.

The wide crocheting pattern is made in three sections, the pointed top part being worked across from top to bottom, adding afterwards the two rows on top and the wide shell edge at the bottom, which needs no description.

HOME TOPICS.

A HOME TOOL-CHEST.—Every housekeeper ought to have a hammer (not too large), a screw-driver or two, a gimlet and a saw of a size convenient for a woman to use. These, with nails and screws of different sizes, should be kept in a box in a convenient place in the kitchen, and girls should be taught to drive a nail, bore a hole or saw off a stick as well as a boy. Often the man of the house is busy, and little things which we could just as well do as not go undone because we haven't the proper tools handy or do not know how to use them. I knew one young lady who waited some days for father or brother to hang the screen-doors. The flies were coming, and she hung them herself, doing as good a job as a man could have done, because she had learned to use hammer, gimlet and screw-driver. Of course, I do not think women ought to do these things always, but it comes very convenient to know how to hang a picture or put up a window-shade or curtain-pole occasionally, when all the men are busy and you want it done right away.

CITY VISITORS.—When friends come from the city, do not be worried because you cannot have beefsteak or roast beef and other things that they are accustomed to have at home, for every meal. A change of diet is one of the pleasures of a visit to the country. Give them broiled ham or bacon, cold boiled ham, chickens, eggs, fresh fruit and vegetables and pure, rich milk and cream, and they will be more than satisfied.

Housekeepers who live in the country often do not realize what a treasure they have in a good tomato patch. Many people only use them on the dinner or supper table, but nothing is more appetizing on a hot morning than a dish of cold sliced tomatoes; then, when the morning is cool, choose firm, not too ripe tomatoes,

and cut them in thick slices (about three to a tomato), roll the slices in flour, sprinkle with a little salt and pepper, and fry them in butter or drippings. Let them brown a little on each side, lift out carefully and lay them on a hot dish. Another nice breakfast dish is baked tomatoes. Take firm, not overripe tomatoes, cut out the stem end with a pointed knife and put a little salt and a generous piece of butter into the hole, set them in a pie-pan and let them bake about fifteen min-



SHORT DRAWERS OF JERSEY MATERIAL.

utes in a hot oven. Serve in saucers with a slice of buttered toast in the bottom.

Besides the friends who visit us from the city, there is another class of city visitors to whom those living on farms near large cities might give a week of untold happiness by inviting them to their homes. I refer to poor working girls or women who are barely able to earn a poor living, without one cent for recreation, and the hundreds of poor little children, whose short lives have all been spent in stifling tenement-houses and close, dirty alleys, who have never had so much as a glimpse of green fields and shady woods. I know it is some trouble to take these little ones into one's home even for a week, but the sight of their pleasure repays for much inconvenience. Think if they were your own little ones. During the late hot weather, people in the best parts of the cities, in large, roomy houses on wide streets, suffered much with the heat, and what must have been the sufferings of those crowded into tenement-houses on narrow streets and alleys, where never a breath of pure, fresh air finds its way. Worthy poor can usually be found by consulting with pastors of churches or officers of associated charities, and in most large cities there is an organization for this especial purpose. "Inasmuch as ye have done it unto one of the least of these, ye have done it unto me."

MAIDA McL.

THE ATTRACTIONS OF WATER-COLORS.

All persons who have a practical liking for art should make themselves acquainted with the use and beauty of water-color paints. They are cheap, in the first place; that is no small virtue, as any one knows who buys an "outfit" for either oil or china painting. For a dollar you can buy a box of water-colors containing three brushes, sixteen cakes of color and two tubes; namely, Chinese white and sepia. The cakes are chrome, gamboge, Indian red, yellow ocher, vermilion, carmine, madder-brown, light red, cobalt, ultramarine, Prussian blue, indigo, ivory-black, emerald-green, Vandyke brown and burnt sienna.

White paper is always better than tints. If you use the latter, you must mix all your colors with white, and that destroys the transparency, which is the chief beauty of this medium. Paper is also cheap, so the best way to learn is to lay in a supply and proceed to spoil it, if need be, till, by means of blunders, you acquire methods of your own, at least knowing what to avoid. You must first wash over your entire surface with clean water. This is to shrink the paper evenly, and also because the paints work better on the dampness. When beginning to work, however, do not have the paper reeking with water.

Many persons complain that this kind of painting is difficult because there are few ways to remedy mistakes. In oil painting we can correct anything by an entire repainting. In crayon we can erase, and on china a wash of turpentine wipes out all that is wrong and gives us what we so frequently long for in this life, a chance to begin over again.

A small sponge and clean water, if patiently used, will weaken any tint too strong, and cause it to disappear if desired. An artistic wipe of this simple instrument will improve the perspective in landscapes by reudering the horizon faint and giving the effect of distance. A sponge the size of an egg is large enough. For very small places, fasten a piece of sponge in the end of a quill. Another device is to cut the bristles from an old tooth-brush and over them fasten a sponge, sewing it on the side next the brush with stout thread. Afterwards trim the sponge with the scissors. You can easily understand how convenient this may be.

Chamois-skin over the end of the finger will wipe off color, but when this is used the surface operated on should be less wet than in the case of the sponge. The chamois is good to use in modeling clouds.

You can take out small, sharp points of light with a penknife, but this must be only after the painting is finished and dry. This is apt to roughen the paper, and therefore make a bad spot if color is put over it.

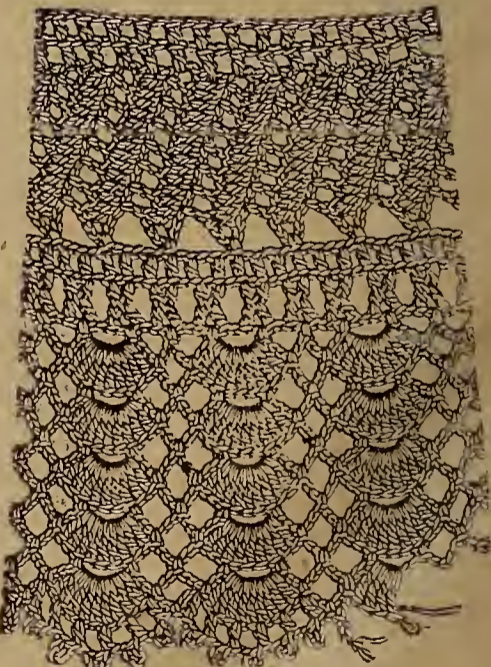
Flowers are pretty in water-colors. A gray background is nearly always appropriate. At first I used to wash in simply a tint of much water and a little ivory-black, but the result was too colorless. It is better to make a gray of carmine, blue and yellow ocher. This is apt to vary, showing now one and now another of the three tints in a way which agreeably avoids monotony.

One of the most speedy ways to catch up a superfluity of water on your picture is to lay on a clean sheet of blotting-paper.

It is supposed that any one who tries to paint in any medium has first learned to draw. This being so, there is nothing to hinder the most pleasing results in water-colors, and by studying the works of master artists, we find that simplicity and direct aiming for effect are the methods to be employed. KATE KAUFFMAN.

LETTER FROM A CONTRIBUTOR.

I can understand and truly sympathize with Mary B., of California. Too many farmers' wives pay no attention to appearances, seemingly. I was born in



PIECE OF CROCHET TRIMMING.

western New York, and my grandparents and parents were farmers; yet, like you, when we went to the city we wished to look well. When sweeping and dusting we wore a dust-cap and gloves, even with the carpet-sweeper.

Cleaning was the worst, but now, with the various brushes, oiled floors and self-wringing mops, one's hands need never be rough. Butter-worker, tumble churn, wringer and steam-washer all save the hands as well as strength. If fuel is expensive, you may prefer Frank Siddall's soap.

Never put the hands in hot water, as it browns them and drives the blood to the face. To avoid this, use a dish-mop, and

with a chain dish-cloth you can save finger-nails. Such helps are cheaper than hired girls.

Have a pair of cotton gloves ready, from which you have cut the tips of fingers and thumbs; sew some old stocking tops to the wrists. These will protect hands and sleeves when picking berries, tomatoes, etc., for the table.

If your face tans or freckles, wear a slat bonnet.

Whenever you wash your hands, use as little soap as possible. Many farmers' wives keep oatmeal, corn-meal or wheat bran in water in glass or earthen vessels, ready for washing both hands and face. Use no water on the face when you are heated, and no so-called cosmetics; instead, use the bran, etc., in the day and at night use buttermilk, washing your face up, not down, and then pat the milk over your face and let it stay until morning. Use warm water always.



SCHOOL DRESS.

Do not fry much food, and you will not need to brown yourself over the stove.

People who exercise much should use light-weight clothing and neither corset nor bands when you dress up. Let everything be loose, as tight clothing, especially a corset, sends the blood to the face and nose, giving a coarse look.

Don't attempt great style in dress, but have the dressmaker make your best gown, as there are many little touches which tell the difference. Choose a serviceable, becoming color, of as rich material as you are able and a pattern that will not be conspicuous if a season or two out of date. Be very careful that no hint of pink or red appears anywhere about your toilet, as it will make your high color more noticeable.

A dust-cloak is indispensable. I prefer rubber, but many use linen in summer and flannel in cool weather.

Of course, these directions presuppose a knowledge of flesh, hair, nail and tooth brushes.

I taught school ten years, and from my acquaintance with four or five hundred teachers, I tell you that if your daughters are natural teachers, strong, with no nerves, and you are sure they will never marry, all right; if not, and you wish to see them well at thirty, don't let them teach. Teachers seldom become healthy mothers of healthy children, if they teach long and are ambitious to excel. If my children were daughters instead of sons, I would prefer telegraphy, or start them out with a camera and the new-style crayon-work for animals, or simple photography of landscapes for the use of artists in oil. Some lady architects are very successful; also, designers and wood-carvers.

If this is any help, I may come again. Ohio. MARY W.

YOU CAN BREAK UP A BAD COLD by the timely use of Dr. D. Jayne's Expectorant, an old and popular medicine for Sore Lungs and Throats, and the best of all Cough remedies.

See in our offer on page 15 how you can secure the beautiful picture, "Columbus at the Royal Court of Spain," in a rich, heavy, 6-inch gold frame, for only \$2.50.

THE BRIDAL DRESS.

Oh, the rustle to it and the glisten to it! Pray, then, listen to it. It is white and bright, with a shimmer of light, Like the moon on the snow on a winter's night. There are pearls sown over it, And the laces which cover it— Was there ever such lace?—like the dainty white trace Of the frost on the pane, of such wonderful grace; Was it ever woven by human hand, Or was it the gift from a fairy's wand? Then the orange blossoms so white and so sweet, Fit to garland my lady from head to feet. Oh, the whiteness of it! Oh, the brightness of it! Yet none too white Or none too bright. My bride is the daintiest maid I know, The dearest and fairest and sweetest, I trow, Ever told of in song or story, Ever sung of in tales of glory. Come weal or come woe, Nothing fears me, my bride— The world's before me And I've you by my side. —Cosmopolitan.

COOKING HERRINGS.

In this country they are the cheapest of fish, and if cooked in the following manner they are delicate and delicious:

If they are to be used immediately after buying, sprinkle them all over with coarse salt and let them remain a few moments, wash off and dip in the following batter: One well-beaten egg and three tablespoonfuls of rich milk. Have ready cracker crumbs rolled very fine; dip the fish into the cracker flour and then into the hot fat, which must have a blue smoke arising from it. Sprinkle with pepper and salt, or put the seasoning in to the batter.

Of course, this recipe is for fresh herrings, but salt ones may be soaked over night in milk and then treated the same. HELPER.

WHAT IS REAL LACE.

A curious question has just been settled by the board of appraisers of the custom-house in New York. The question is as to what constitutes lace—in what the distinguishing mark of lace, as different from other thin fabrics, consists. It arose from a large importation of dress-goods in what is called nets or drapery laces. If these were true laces they were subject to a higher duty than if they were simply thin fabrics. It was claimed by the importers that true laces are edgings in narrow widths, used for flouncings and ornamentation, but that wide nets when sold by the yard and sewn up into gowns are not laces, but dress-goods, like silk or any other fabrics. Thus the question arose as to all these diaphanous fabrics of which evening dresses are made—are those lace or are they not lace? What constitutes lace, anyway, the material of which it is woven, the way in which it is woven, or the decoration?

A great deal of patient groping about after information was necessary before these bewildered men could find their way into the clear light of the knowledge of those things in which women live and move and have their being. But they did get into it at last, and this is the decision they set down, by the light of which any woman will be able to tell at once whether she has true laces in her possession or not.

The one characteristic of lace that distinguishes it from all other fabrics lies not in the material of which it is made, because that may be of silk or of linen or of cotton. Neither does it lie in the decorations that are wrought upon it, because the same needlework is often put upon other fabrics. But the one characteristic of lace—the real lacyness, so to speak—lies in the way in which the net itself is woven.

"The hexagonal mesh," says the report of the authorities, "is the essential feature, as it is the distinguishing characteristic of lace, the process of its formation being akin to knitting, as it is the antithesis of weaving. The presence of the hexagonal mesh in a textile fabric is conclusive of the fact that it is a woven fabric; that is to say, not a lace."

Clearly this gives a woman exact data from which to build up her knowledge of laces. The hexagonal structure or lace mesh is what makes lace, whether the fabric is wide or narrow, finished or unfinished at the edge. This makes laces of all the nets used for gowns or trimmings,

if they have the openwork structure. Chiffon is not lace, but fish net and Brussels net are. Tulle is lace, but the sheerest mull is not. The face-veilings are properly lace veils, except the grenadines, which are not, no matter how heavily they may be edged.—Cincinnati Commercial-Gazette.

ECONOMICAL FRUIT PUDDINGS.

A cup or more of fruit of any kind. If tart cherries, stone and sprinkle liberally with sugar an hour before using. Use as much flour as fruit, and a teaspoonful of good baking-powder to each cupful of flour; add a pinch of salt and sift twice. Stir the fruit into the flour and then add enough water to mix into a stiff dough. Pour into a well-greased mold or pan and steam from twenty minutes to half an hour, according to the size. Turn out on a plate and serve with cream and sugar. One cupful of fruit will make dessert for four persons.

Apples and peaches should be sliced. No sugar should be put into the dough, which, if properly made, is very light and as easily digested as well-made bread.

HELPER.

HOME WASHING.

The laundering of men's shirts is one of the most serious parts of the week's washing. A great number of housekeepers solve the problem in an easy manner by sending the shirts to a professional laundry. This is simply avoiding the problem. Public laundries are not unalloyed public joys. The most powerful chemicals are undoubtedly used in them in washing the clothes, and no clothes washed regularly at a public laundry last half the time of those done up carefully at home. Where washing is given out and handled by a number of people from the dirtier portions of the city, there is always danger of bringing infectious diseases into the family. Statistics show that this is a fruitful source of infection of families who live in a wholesome manner. There is less danger in giving the clothes to a public laundry, where, at least, they are not washed in the living-rooms of a family, than to give them to a private washerwoman who lives in a tenement-house; though in the laundry there is again the danger that the clothes will be contaminated by some of the multitude of clothes that are washed there. At all events, it is exceedingly desirable that all the family washing be done at home whenever it is possible to do so.

Even though powerful chemicals are used in laundries, all the dirt is seldom removed, and the neck and edges of the



PETTICOAT.

wristbands of shirts shows how very perfunctory has been the labor performed on them. Some housekeepers, therefore, go so far as to have the shirts washed at home and then sent to the laundry to be done up and ironed. The gloss and stiffness which some people admire in linen done up at the laundry may be produced by first starching them in hot starch, then in cold starch. Hot starch should be applied as hot as possible, a tablespoonful at a time, and rubbed into the bosom. After the starch is applied rub it in vigorously, and after the right side will take no more, rub it in on the other side. If the starch is not thoroughly rubbed in before the

shirt is hung up, the bosom will blister when it is ironed. When the shirt is dry make cold starch; dissolve a quarter of an ounce of gum arabic in a pint of hot water, strain it and let it cool; then add an ounce of fine, raw starch, and finally the white of an egg. Lay the bosom of the shirt on a board and apply this starch with a sponge, frequently stirring the starch while doing so. Wrap the bosom up in a cloth and in about an hour iron it.

Some laundresses rub the bosom carefully with a cloth wrung out in boiling water to equalize the starch before they begin to iron. The best cover for a bosom-board is soft flannel, and the best bosom-board is one with clamps at the four corners to hold the bosom firmly in place.

Before beginning to iron, most laundresses lay a thin cloth over the bosom of the shirt and pass the iron over it once. They then remove it and use the polishing-iron vigorously. A good polishing-iron will cost from a dollar to two dollars, and in the proper use of the polishing-iron lies the secret of the gloss, rather than any special method of making starch, different laundries using different methods. A teaspoonful of kerosene or a piece of wax should be added to every quart of boiled starch to prevent it sticking to the iron.—New York Tribune.

PUDDINGS.

At this season puddings are both wholesome and refreshing, and much more easily made than pie.

SPONGE-CAKE PUDDING.—Slice some sponge-cake and line a well-buttered, deep pudding-dish with it. Fill this with alternate layers of fruit jam and cake; over this pour a plain custard and bake about twenty minutes, or until the custard sets.

BAKED RAISIN PUDDING.—Chop one pound of suet, and stone and cut in half one and one half pounds of raisins; mix with the suet a teaspoonful of salt, two ounces of cinnamon and grated nutmeg. Stir the whole, gradually adding two pounds of flour, and add just enough milk to make a stiff batter. Put into a well-buttered pudding-dish and bake two hours.

PLAIN CABINET PUDDING.—Butter a pudding-dish and line it with stoned raisins, then nearly fill with well-buttered bread with the crusts removed. Cover with six well-beaten eggs stirred into a quart of milk; sugar to taste and add one half ounce of nutmeg. Let it stand about fifteen minutes, then tie a floured cloth over it and boil for an hour and a half. Serve with fruit sauce.

HELPFUL HINTS.

CUCUMBERS PRESERVED IN IMITATION OF GINGER.—Choose the vegetables firm and fresh; pare and split them in halves, lengthwise, soak for three days in strong brine, wash in fresh water and dry quickly on a clean cloth, and put them in a pan with plenty of water over the fire. As soon as this boils, drain it all off; repeat this again, adding a small lump of bicarbonate of soda. Boil half an hour, then let the cucumbers stand in that liquor over night, then drain them well. Bruise well in a mortar half a pound of the best ginger-root; boil this in one and one half quarts of water with one ounce of cloves and a stick of cinnamon. Strain through a jelly-bag, return to the pan, and to every pint of juice add one and one fourth pounds of loaf sugar. Clarify this syrup with a little white of an egg. After it has boiled up and been skimmed, lay the cucumbers in carefully with the odd bits of ginger, and let it all boil for ten minutes. Pour all into a jar and set it in a cool place for two days; drain off the syrup, put it to boil again and lay in the cucumbers for ten minutes. Again let it stand for three days, after which pour the syrup, ginger, etc., into a pan, add the cucumbers when it boils, and after three quarters of an hour return the whole to the jar, which leave uncovered in a cool place for twenty-four hours. Cover well the same as jellies or other preserves.

FISH SAUCE, No. 1.—Take the yolks of two hard-boiled eggs; pulverize them well, add mixed mustard, pepper, salt, three tablespoonfuls each of salad-oil and vinegar, one tablespoonful of tomato catsup.

No. 2.—One half pint of cream and milk mixed, two eggs well beaten, juice of one half lemon, salt and pepper; put on the fire and stir constantly until it thickens.

Culture of Flowers.

BY GEORGE W. PARK.

FUCHSIAS AND ROSES.



LADY in Montana wants to know something about the cultivation of Fuchsias and roses. Fuchsias should be given a rich, porous, well-drained soil, and an abundance of water during the summer. Do not expose them to the full rays of the sun at midday. They will not endure exposure either to the bright sun or drying wind. Water sparingly in winter and give them an upper shelf in a dry, frost-proof cellar. Cut back and replot the plants in the spring. They are summer bloomers.

Roses like a rich, tenacious soil. Plant them early in spring, if possible, hoe frequently, and mulch well in summer with stable manure. A sunny position suits them best, and as they bloom, cut the branches back to induce new growth and new buds. This is especially the treatment for the ever-blooming sorts. The summer roses, those hardy kinds that bloom but once a year, need to be pruned and the blooming branches cut back just after blooming. Hybrid perpetual roses that bloom sparingly should be sparingly pruned at any time. Late in autumn or early in winter, when the ground becomes frozen, give the bed a coat of manure, then cover all with evergreen boughs. If the climate is severe, surround the bed with a board frame to keep out cutting winds, and place a close board cover over to keep out rain and snow. Let the upper parts of the ends remain open, so the air may circulate among the evergreens and prevent the plants from smothering. These simple directions will enable any one to grow a bed of roses successfully.

A HUMID AIR FOR PLANTS AND PERSONS.

Why do the leaves of Geraniums turn yellow and dry up? I never water them till dry, and I have them in a room where it is not often hot.

Fergus county, Mont.

AUGUSTA WEYDERT.

ANSWER:—The drying of the Geranium leaves referred to is doubtless due to too dry an atmosphere. Many persons notice the fresh, thrifty appearance of the plants in some humble cottage window, but do not stop to consider that their beauty is due to the steaming kettle upon the kitchen stove, making the air humid with the ever-flowing steam. Those who have never tried the evaporation of water in a plant-room will hardly believe the advantage it is to the plants nor the influence it has upon human life. Persons who become accustomed to a humid atmosphere in a room, so appreciate it that they will not do without the evaporating-pan upon the stove or register, even though there is not a plant in the room. It is a health requisite to human as well as plant life, and should not be neglected in any home.

PLANTING AND CARE OF TULIPS.

Please tell me, through your paper, how to plant and cultivate tulips. I wish to plant a bed of the bulbs, but know nothing about the work, nor the culture required.

Stanton, Iowa.

MRS. BISHOP.

ANSWER:—The bulbs of tulips are solid, fleshy, from an inch to an inch and a half in diameter, and rather irregular in shape, as indicated in the accompanying sketch. They should be set about three inches deep and six inches apart, in rich, well-pulverized and well-drained soil. The best time to prepare the bed is in September or



TULIP BULB.

October. At this season the bulbs are entirely dormant and may be obtained from any florist. After planting, a few mixed flower seeds of hardy annuals may be sown over the bed. These will come into bloom after the tulip flowers fade, and will prove interesting and attractive. Those who are fond of bedding plants can plant the bed with Geraniums or Petunias after the bulbous flowers fade, if such a display is preferred.

There is really little more to be said concerning the culture of tulips. They are of such a character that they will thrive in almost any soil or situation, and bloom satisfactorily if they have but half a chance. A good way to enrich the soil

is to cover the bed with a heavy coat of manure in autumn, to be removed early in spring, before the foliage appears. If left on, the bulbs will not bloom as early as if the covering is removed. Some cover the bed late in autumn with evergreen boughs. This, however, is altogether useless in mild climates.

A tulip bed need not be reset more than once in three or four years. This work should be done as soon as the foliage dies, so that the bulbs may be lifted without injury. Keep the bulbs out of the ground as short a time as possible. The air is injurious to them if they are exposed for any length of time. To have fine bulbs, and consequently fine flowers, promptly remove the flower stem as soon as the flower fades, to prevent seeding.

SOWING FLOWER SEEDS.

1. When is the right time to sow the peonies and lily-of-the-valley? How deep should the seeds be planted, and how long does it take them to sprout? 2. Would it do to sow Begonia seeds in May? In what temperature should they be kept, and how soon can plants be seen above the surface?

La Riviere.

CARL M. GREEN.

ANSWER:—1. Peonies and lily-of-the-valley are mostly raised from divisions of the root, and not from seed. To raise them from seed, it would be well to sow them shortly after they ripen, covering them not more than a third of an inch deep with leaf-mold and loam well mixed and sifted. After sowing, firm the soil well, which will hasten germination. The time required for germination will depend largely upon the freshness of the seeds and the condition of soil, temperature, etc. 2. Begonia seeds are as fine as road dust, and only those who understand raising plants from seed should attempt their culture. Use a flower-pot saucer in which to sow the seed, and fill it with sifted leaf-mold, pressed firm and smooth. Press little furrows over the surface, and holding the seeds in a piece of stiff writing-paper in the left hand, tap gently upon the knuckle with the finger of the right hand, thus distributing the seeds evenly in the row. Do not cover them. Now place a saucer inside a larger one, and moisten the soil by pouring water into the larger saucer. In half an hour the soil will be moist, and must be kept moist—not wet—till the seeds germinate, which will be in a week or ten days. Watch the soil, and do not let it get dry. Keep covered with paper and in a shady place. When germination takes place, remove the paper, but keep shaded till the plants are large enough to transplant; then admit sun morning and evening, but keep shaded at midday. Those who understand the delicate nature of greenhouse seedlings have no trouble in raising Begonias from seed, when treated as here recommended. The inexperienced florist, however, had better raise plants from large and more hardy seeds till he understands the general requirements of greenhouse seedlings.

TO HAVE LILY-OF-THE-VALLEY BLOOM.

What ails my lilies-of-the-valley? They don't bloom. I have had them three years. This last year the foliage is very large, but seems to go all to leaves. Mrs. K. Iowa.

ANSWER:—Give the plants a sandy soil and not too much shade. In a rich clay loam and shady place they often make a luxuriant growth of leaves, but fail to bloom, the energy of the plant apparently being expended in growth of foliage at the expense of flowers.

PROPAGATING HOYA.

Two years ago I rooted a leaf of wax-plant. The root is quite large, but the leaf makes no further growth. What is the cause, and how shall I treat it? Mrs. W. KING.

ANSWER:—The leaf of Hoya will form roots readily and will live for years, but will make no further growth, as it is destitute of latent buds. To propagate plants, a portion of the stem to which the leaf is attached must be taken.

PERENNIAL HONEY-PLANTS.

Please give a list of honey-plants and flowers having roots that withstand the winter and bloom annually. We want them for open grounds around walks, etc. I cultivate as many different kinds as I can get.

Farmington, N. M.

J. GROLLITT.

ANSWER:—Among the best bee-plants suitable for edgings are the common dandelion and white clover. These are perfectly hardy, and will grow almost anywhere without cultivation. Alsike

clover and red mammoth clover grow taller and bloom very freely. Cultivated as flowering plants, these appear well till after they have bloomed, when they should be cut and allowed to make new growth. The old-fashioned thyme, also catnip and nearly all the mints, are very valuable for bees. The common motherwort is excellent, and grown in clumps and cultivated loses much of its weedy appearance. Various species of Malva, Anchusa and Cassia are also recommended. All of these are easily propagated from seed.

DISEASED GERANIUMS.

I have a pink Geranium which curls its leaves when it becomes eight or ten inches high and blooms but little. The leaves come in little knots—from ten to fifteen in a knot, or hunch. I have started a number of cuttings from the old plant, and they all act in the same way. Please explain the cause and give a remedy.

L. NICHOLS.

Little Rock, Ark.

ANSWER:—This seems to be a disease to which some Geraniums, particularly the silver-edged ones, are subject. The best remedy is to destroy the diseased plants and get healthy ones, or of varieties not affected.

Harvest Excursions—Half Rates.

August 30th and September 27th.

The Burlington Route will sell round trip tickets at half rates, good 20 days, to the cities and farming regions of the West, Northwest and Southwest. Eastern Ticket Agents will sell through tickets on the same plan. See that they read over the Burlington Route, the best line from Chicago, Peoria, Quincy and St. Louis. For further information write P. S. EUSTIS, General Passenger Agent, Chicago.



BROWN'S FRENCH DRESSING

—FOR—

LADIES' & CHILDREN'S BOOTS AND SHOES.

Awarded highest honors at Phila., '76 | Melbourne, '80
Berlin, '77 | Frankfurt, '81
Paris, '78 | Amsterdam, '83
New Orleans, 1884-85, and
wherever exhibited.

Paris medal on every bottle.

Beware of Imitations.

This blacking is in liquid form and is applied to shoes or other articles of leather by means of a sponge, attached to the cork by a wire, so that the blacking can be used by anyone without soiling the fingers. No polishing brush is required. It dries immediately after being applied, and will not soil the most delicate clothing. Sold by all dealers.

B. F. BROWN & CO., Boston, U.S.A., Mfrs.

BEWARE OF IMITATIONS OF OUR "AD."

"A dollar saved is a dollar earned." This Ladies' Solid French Dongola Kid Button Boot sent, prepaid, anywhere in the U.S., on receipt of Cash, Money Order, or Postal Note, for \$1.50. Equals every way the boots sold in all retail stores for \$2.50. We make this boot ourselves, therefore we guarantee the fit, style and wear and if any one is not satisfied we will refund the money or send another pair. Common Sense and Open Eye, with a C. D. E. & E. E. sizes 1 to 8, in half sizes. Send your size; we will fit you.

DEXTER SHOE CO., 143 Federal St., Boston, Mass.

Mention this paper when you write.

\$5. AN HOUR made taking measures for
Pants to order - - \$3. }
Suits to order - - \$15. } up-
Overcoats to order \$12. } wards
We want an Agent in every town.
Write for terms to sell goods every man must have. Address
HUNTER MFG. CO., CINCINNATI, O.
LARGEST TAILORING FIRM IN THE U.S.
If in need of clothing write for samples and rules for self-measurement.
Mention this paper when you write.

What Agents Say of Tokology, a complete Ladies' Guide in health and disease. "I love TOKOLOGY and am delighted to be in its service. I can sell just as well in territory that has been canvassed." "At least 5 out of every 6 have subscribed." "Worked 10 days and have 61 orders." Prepaid, \$2.75. Sample pages free. Best terms to agents.
Alicia B. Stockham & Co., 277 Madison St., Chicago.
Mention this paper when you write.

10 DAYS FREE TRIAL in your own home. First class Sewing Machines shipped anywhere to anyone at wholesale prices. All latest improvements. Warranted five years. Complete set of attachments FREE. Send for catalogue. Standard Singer Machines, \$9.50 to \$15.50
\$50 Arlington Sewing Machine for \$19.50
\$50 Kenwood Sewing Machine for \$23.50
CASH BUYERS' UNION, 160 W. Van Buren St. B 53 Chicago.
Mention this paper when writing.

DOUBLE Breech-Loader \$7.99.
RIFLES \$2.00
WATCHES

BICYCLES \$15
All kinds cheaper than elsewhere. Before you buy, send stamp for catalogue to THE POWELL & CLEMENT CO., 166 Main St., Cincinnati, O.

GUNS
All kinds cheaper than elsewhere. Before you buy, send stamp for catalogue to THE POWELL & CLEMENT CO., 166 Main St., Cincinnati, O.

HERE IS A DANDY
A good dark-mixed Casimere Suit, a pair of Shoes and a pair of black Stockings to fit boys 4 to 13 years of age,
All for \$3.86.
If you are not perfectly satisfied with these goods return them at once and we will refund amount of purchase, less expressage.

In ordering this outfit, give size of shoe as well as age of boy. In sending money we advise P. O. order or registered letter.
THE WERDEN CLOTHING CO.,
707 Broadway, New York City.
Catalogues sent free to any address. Reference, by permission, **ASTOR PLACE BANK,** NEW YORK CITY. Mention this paper.

ALFRED PEATS Wall Paper Merchant,
will send you his guide, "HOW TO PAPER," and 100 beautiful samples of fine

WALL PAPER

Good Paper, 3c. Gold Paper, 5c. **FREE**

Handsome Gold Parlor Paper 10, 12½ and 15c per roll, all with wide borders and ceilings to match. Will refer you to 10,000 Well Satisfied Customers. Agents' sample book, \$1.
ALFRED PEATS, 136-138 W. Madison St., Chicago.

LADIES' ROLL TOP
First-class. Delivered any station east Rocky Mountains for \$17. Send for Free Cat. Emerson-Moore Desk Co., Indianapolis, Ind.

SYLPH CYCLES RUN EASY
Perfection of cycle manufacture; no need now to ride springless cycles or depend on tires alone for comfort. Sylph Spring Frame destroys vibration. Light, simple, strong. Cata. free. Rouse-Durjoy Co., 32 E. St., Peoria, Ill. AGTS. WANTED

CARDS
The Globe Card Co. has always been noted for promptness in filling orders and for excellence of ends and premiums. This year to introduce our goods in thousands of new homes, we make a grand offering: For 10 CTS. we will send 12 lovely Hidden Name Cards, name on 1 Magic Name Revealers, 1 Oracle of Kismet (answers all questions), a large lot of Album Verses and Comendums, Agent's complete outfit, and this lovely GOLD Ring. Don't confound this ring with the brass ones sold by many card printers; this is GENUINE ROLLED GOLD plate warranted 1 year. We lose money on this offer, but hope thus to introduce our excellent goods to many new customers. GLOBE CARD CO. Box 95, Centerbrook Conn.

FREE.

Our large 24-page Catalogue, profusely illustrated, full of information on the proper construction of Pianos and Organs. We ship on test trial, ask no cash in advance, sell on instalments, give greater value for the money than any other manufacturer. Send for this book at once to **BEETHOVEN ORGAN CO.,** WASHINGTON, N. J. P. O. Box 628.

FREE 14 K. SOLID GOLD FILLED
Ladies or Gents Size. Warranted 21 Years. For Perfect Time this Famous Elgin or Waltham Watch is ahead of this world. BEATS THE RECORD. Read what the oldest conductor on the fast limited train between New York and Chicago, which runs on the oldest time in the world, says. He says that "In one year this watch varied only 2 seconds," the closest time on record. This watch has never been sold for less than \$30.00. We will now sell it for \$13.95. It is full engraved, stem winder, \$13.95 Elgin or Waltham, double tempered hair spring which cannot break; the jewels are solid diamond, ruby stones, which will never wear out of place. Don't tempt fate; this elegant timepiece with the cheap plated watches advertised at various prices. Bear in mind that you are having a watch your jeweler would charge you from \$40 to \$50 for. Stem wind, stem set, hunting case, and one of the best Elgin or Waltham movements made. FREE TO EXAMINE. This watch sells on sight, and we offer to ship you either ladies or gents size, as you select, by express C. O. D. for \$13.95. You can examine at express office and if satisfactory pay the price and charges and take the watch. If not as represented order returned to us at once and pay nothing. Remember you pay nothing unless you take watch. Cut out this advertisement and send with order to **CHICAGO WATCH CO.,** 281 Wabash Ave. Chicago, Ill.

If afflicted with sore eyes use **Dr. Thompson's Eye-Water**
Any of our readers who may be out of employment should read page 15.

Our Sunday Afternoon.

"AS ONE WHOM HIS MOTHER COMFORTETH." Moaning I lay at the foot of the cross, My load seemed too grievous to bear— Longing for help and compassionate love, I had carried my burden there.

I could not pray, I could only moan, My heart was so wounded and sore; I longed for rest, and I longed for home, As I never had longed before.

But the Master had not forgotten his child, He read the unsyllabled prayer, He gathered me close in his loving arms, And quietly held me there.

The gnawing pain at my heart grew less, While the tears fell one by one, And the burden that had so heavily pressed Grew lighter, and then was gone.

—Jennie P. Rice.

"CONSIDER YOUR WAYS."

THUS saith the Lord of the Israelites, through his prophet, Haggai. This was a very important injunction. God knew that if those people should consider their ways—consider them in all their bearings, in their relations to him and the final judgment—it would lead them to serious and deep reflection. Their ways were such as ought to have made them ashamed of themselves—yea, repent in dust and ashes before God and lead them to cry out for mercy. Now, people generally do not like to impartially and profoundly consider their ways. Especially is this true of ungodly people. They try to forget some of their ways. They will not bear the light. There is deceit, fraud, malice and black villainy in their ways. The bad things which one does look worse after they have been done than they look while being done.

Who has not looked back upon certain things which he has done and wished hundreds of times that he had not done them? As Dr. Watts, in poetic lines, says: "Past offenses pain my eyes." It is painful to consider some of our ways. But to the true Christian there is a relieving feature to this matter, and that is if he have repented of his wrong ways—and every true Christian does—God has pardoned him, cleansed him and caused him to hate the evil he may have done. And then, too, he may consider his ways as being under the fatherly guide and loving concern of his God, and that he appreciates the Christian's struggle to walk in the ways of righteousness. But, sinners, don't you consider that your ways are extremely dangerous? God cannot approve of them. Forsake them and seek God's ways.—*Messiah's Herald.*

THE RIGHT RELIGION.

There are so many antagonizing systems of worship, it is evident to reflecting minds that all cannot be entitled to divine favor; and this fact gives force to the query, Which is the right religion? To which we respond:

1st. A right religion is more than a right theory, though a right theory is an important appendage thereto; for truth is always preferable to tradition, even when tradition does not antagonize the Bible, but especially when it comes in collision therewith.

2d. A right religion is more than a right moral life, though that is good when existing as a product of inward divinity; but it extensively exists as a fruit of mere human culture independent of vitalizing divinity.

3d. A right religion sweetly adjusts the heart to the will of God by liberating it from the dominion of carnality, and placing it under the controlling power of divinity. This heart renovation, coupled with sacred mental illumination, makes both the heart and head right. It is an experience that gives present communion with God, and an intelligent contemplation of coming glory.—*W. S., in Our Hope.*

ALL'S WELL.

Crossing the great deep at night, lying sleeplessly and perhaps painfully in your berth, longing for the light, without much hope that it will bring you comfort, what hear you? The surge of the water, the moan of the wind and the tinkle of a bell. That bell has no sooner told its tale of time than a voice in a sing-song tone says, "All's well, all's well!" It is the man on the lookout. You say, "How can all be well when I am not sleeping? How can

all be well when I am sick and in pain? How can all be well when I am not at home, and the children are longing for me?" There is a higher law than your sleeplessness, your pain and your child's desire for your presence. Within those limits you are right—all is not well—but in the higher sphere that takes in a larger area and commands a wider outlook, all's well, all's well. So it is with this marvelous mystery, this strange Providence. "I am sick, and tired, and heart-broken, misunderstood, and belied, and slandered, and ill-fed, and battered down," saith the Christian man, but the angel on the lookout says, "All's well, all's well!" The vessel has her face straight home, and the sea is yielding to give her passageway. "All's well, all's well," and at last at home,

"Above the rest this note shall swell, My Jesus hath done all things well."

—Joseph Parker, D. D.

ARISE AND BE READY.

As the silvery morning, with its dewy freshness and inspiring breezes, calls us to arouse from our slumber and prepare to meet the rising sun, so the present prophetic daybreak is calling up the sleeping virgins to arise and shine, for "Behold, the Bridegroom cometh." And while the world is busy in its unbelieving course, let us be "as men who wait for their Lord."

The true and proper attitude of "the faithful in Christ Jesus" is to be that of "virgins" who are waiting for "the Bridegroom." They should be characterized by self-abnegation and unworldliness, "denying ungodliness and worldly lusts, and living godly, righteously and soberly in this present world."

This habit will, of course, make them appear somewhat singular, and "men wondered at." Still it will secure to those who thus walk, a restfulness of spirit, a cheerfulness of heart, and quietness of conscience to which those who follow "the fashion of this world" will be comparative strangers. Jesus will then give them his fellowship, and they will realize "the peace of God that passeth all understanding," and "the joy of the Lord will be their strength."—*Rev. W. Frith, F. R. G. S. (England).*

TRUE.

The well-built Christian is harmonious in all his parts. No one trait shames another. He is not a jumble of inconsistencies—to-day devout, to-morrow frivolous; to-day liberal to one cause, to-morrow niggardly toward another; to-day fluent in polite falsehoods. He does not keep the fourth commandment on Sunday and break the eighth commandment on Monday. He does not shirk an honest debt to make a donation. He is not in favor of temperance for other folks and a glass to-day for himself. He does not exhort or pray at each of the few meetings he attends, to make up arrearages for the more meetings which he neglects. He does not consume his spiritual fuel during revival seasons and be as cold as Nova Zembla during all the rest of the time, nor do his spiritual fervors outrun his well-ordered conversation.—*Dr. T. L. Cuyler.*

SUGGESTION FOR A SUMMER TRIP.

If you wish to take the trip of a lifetime, purchase the low rate excursion tickets sold by all principal lines in the United States and Canada via the Northern Pacific Railroad to Yellowstone National Park, Pacific coast and Alaska.

The trip is made with the highest degree of comfort in the elegant vestibuled trains of the Northern Pacific Railroad, which carry dining cars and luxurious Pullman sleeping cars from Chicago, St. Paul and Minneapolis to Montana and the Pacific coast, without change, and special Pullman sleepers from St. Paul and Minneapolis to Yellowstone Park.

The scenery en route is the most magnificent to be found in the seven states through which the road passes. Beautiful mountains, rivers, valleys, lakes and plains follow each other in rapid succession to delight the tourist, who will also find interest in the agricultural, mining, lumbering, industrial and other interests associated with the development of the great Northwest.

The crowning glory of the trip through the Northwest, however, is the visit to Yellowstone Park, the land of hot springs, geysers and gorgeous canons, and to Alaska with its endless ocean channels, snow-capped peaks, Indian villages and giant glaciers.

If you wish to investigate this suggestion further send to Charles S. Fee, General Passenger Agent, N. P. R. R., St. Paul, Minn., for copies of the handsomely illustrated "Wonderland" book, Yellowstone Park and Alaska folders.

Pleasant, profitable employment is offered every energetic person in introducing our world-famous picture, "Columbus at the Royal Court of Spain," in their neighborhood. See our grand offer on page 15 and write us for full particulars.



NEW ENGLAND CONSERVATORY

Founded by Dr. Eben Tourjee. OF MUSIC. CARL FAELTEN, Director. Music, Elocution, Fine Arts, Literature, Languages and Tuning. A safe and inviting Home for lady pupils. Send for Illustrated Calendar. FRANK W. HALE, Gen'l Manager, Boston, Mass. Mention this paper when you write.

Williss SHORTHAND Springfield, Ohio. Oldest and largest exclusively Shorthand College in U. S. For 12 years the leading school of its kind in America. No vacation. Circulars free. Address F. W. WILLISS, Expert Steno., Prin.

SHORT HOME-FREE. Only one student in each town given this privilege. **WRITE NEW RAPID COLLEGE OF SHORTHAND** BUFFALO, N. Y. Send stamp for full particulars.

PATENTS LEHMANN, PATTON & NESBIT, Washington, D. C. Examinations Free. Send for circular.

Buy **WALL PAPER** By Your Mail **AT WHOLESALE PRICES**

Handsome New Designs, 3c a roll. Beautiful Gilt Papers, 5c a roll. Elegant Embossed Gilt Papers, 8c a roll. 4 to 9 inch Borders, Without Gilt, 1c a yard. 4 to 18 inch Borders, With Gilt, 2c and 3c a yard. Send 8c to pay postage on over 100 samples. Address F. H. CADY, 305 High St., Providence, R. I. Mention this paper.

A GOLDEN OPPORTUNITY To engage in a legitimate and profitable business that will pay from 100 to 200 per cent. to any person who wishes to embrace the within offer and go in to make money. We will sell castings for the LADIES' FRIEND WASHER at an extremely low price, enabling them to make their own boxes, or have them made by competent parties. We will work on the above plan ONLY in territory which we have not sold outright. For further information, address **D. L. BATES & BRO., DAYTON, OHIO.**

LOOK HERE! Do you use lamps? Our patent attachment improves the light, avoids dirty work in filling, saves time and money. You need it. All housekeepers need it. Samples free; and Gold Watch premium to first each week. Write at once. Agents wanted. Good pay, steady work. 3 months subscription to Monthly Journal for 2c stamp. **J. Bride & Co., Nassau St., New York, N. Y.**

PRINTING OUTFIT 15c COMPLETE, 4 alphabets rubber type, type holder, bottle ink, ink pad and tweezers. Put up in neat box with directions for use. Satisfaction guaranteed. Worth 50c. Best Linen Marker, Card Printer, etc. Sets names in 1 minute, prints 500 cards an hour. Sent postpaid 15c; 2 for 25c. Cat. free. **R. H. INGERSOLL & BRO., 65 Cortlandt St., N. Y. City.**

A BIG OFFER 50c. MADE IN A MINUTE! If you will hang up in the P. O., or some public place, the two show bills that we send, we will give you a 50c. cert., and send it in advance with samples and bills. This will trouble you about one minute, and then if you want to work on salary at \$50 or \$100 per month, let us know. We pay in advance. **GIANT OXIE CO., 21 Willow St., Augusta, Me.** Mention this paper.

CLEVELAND OR HARRISON! To immediately introduce our large illustrated catalogue of Campaign Badges, Emblems, Watches and Jewelry, we will send an Elegant Gold Plated CAMPAIGN BADGE FREE of all cost providing you send two stamps to pay the postage. State which one you want. Free offer limited to ones willing to show our goods. **WILLIAMS, 125 S. Halsted St., Chicago, Ill.**

Kennedy's Medical Discovery

Takes hold in this order:

Bowels, Liver, Kidneys, Inside Skin, Outside Skin,

Driving everything before it that ought to be out.

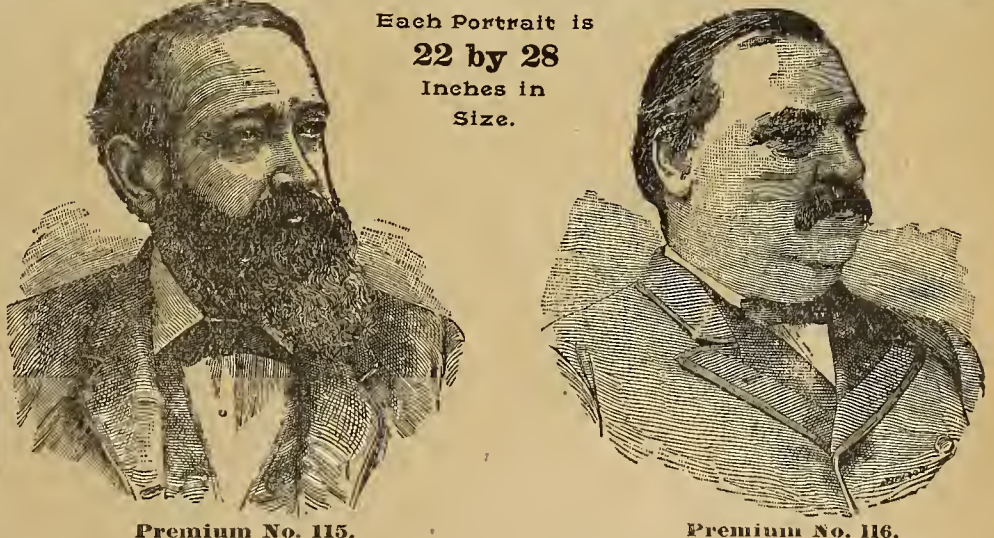
You know whether you need it or not.

Sold by every druggist, and manufactured by **DONALD KENNEDY, ROXBURY, MASS.**

2²⁵ FREE No Money Required. Cut this out and send it with your order, and we will send this watch by express for your examination; after you examine it, and find it as represented, pay the express agent \$2.25 and express charges and it is yours, otherwise you pay nothing and it will be returned at our expense. This is positively the best watch ever offered on the face of the earth at this price, and we warrant it a perfect time-keeper. With each watch we send our mammoth catalogue and a lovely gold plated chain and charm free, also a printed guarantee which gives you the privilege of returning the watch at any time within one year if it does not give satisfaction. Address **THE NATIONAL MFG. & IMPORTING CO., 334 Dearborn St., Chicago, Ill.**

10 CENTS (Silver or stamps) printing your address boldly on gummed paper in either the **LADIES OR GENTS GILT EDGE DIRECTORY** for an entire year. Thousands of firms whose addresses we have want the names of such persons, to each of whom they mail books, novelties, magazines, pictures, cards, papers, letters, catalogues, etc. Free as samples. Our Directory patrons receive bushels and barrels full of mail within a year, each parcel with their address pasted thereon. Try it. Better than any lottery. No blanks. Everyone receives prizes daily. You will receive biggest mail of anyone in your town and be well pleased and amazed at the presents you will receive for so small an investment. Our regular price is 25c. but to all who have never tried our Directory, we will make the price **10 cents**. Don't subscribe dollars for high priced magazines and papers when for **10 cents** you can receive daily, more sample magazines and other choice and varied reading matter than your brain can digest in a year. Rush on your address PLAINLY written. State in which Directory you want your address inserted, Ladies or Gents. 30c. for either, 20c. for both. **GILT EDGE DIRECTORY CO., No. 2 Pepper Building, Philadelphia, Pa.**

If afflicted with sore eyes use **Dr. Thompson's Eye-Water**



Magnificent Lithographic Portraits of Pres. Benj. Harrison and Ex-Pres. Grover Cleveland.

Republican and Democratic Presidential Candidates.

These portraits are large and handsome, 22 inches by 28 inches in size and perfect likenesses, worthy of a place in any American home. A world-wide interest is centered upon these two eminent American citizens, who represent the two great political parties of the day, and we offer you an unequalled opportunity for securing an authentic

PORTRAIT OF YOUR FAVORITE, FREE.

Upon receipt of 50 cents for one year's subscription to either *Farm and Fireside* or *Ladies Home Companion*, and 5 cents extra for postage and packing, we will mail free one of these handsome portraits to any address.

Or, one will be mailed free to any person sending only one new subscriber to either paper. Give the premium number of your choice.

We will make specially low prices to political clubs or parties ordering in quantities for campaign purposes.

Address **FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.**

Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Irrigation Journal.—O. B. L., Coldwater, Kansas. The *Irrigation Age*, Denver, Colorado, would probably suit you. Send for sample copy.

Snails.—C. J. S., writes: "Please tell how to get rid of snails. They crawl around on rocks and get into our cellar in a wet time." **REPLY:**—If your premises were properly drained, as they ought to be, you would not be bothered with snails.

To Prevent Snoring.—Miss S. P. B., Logan, Utah, writes: "Can you recommend anything to break a person of the habit of snoring?"

REPLY:—Yes. Sleep with the mouth shut. To keep the mouth closed during sleep, it may be necessary to fasten a light band over the top of the head and under the chin.

Weedy Meadow.—T. J. F., Dickson, Tenn., writes: "I have a piece of land that has volunteered clover on it. The weeds are now waist high. What should I do with them? Mow them down and let them lie?"

REPLY:—Go over your field carefully, and see that you have a good stand of clover, that it is uniform and thick enough to make a good meadow. Then, if the weeds are not heavy enough to smother the clover, you can mow them down now and let them lie. If the crop of weeds is very heavy, you may have to haul it from the field to save the clover.

Cauliflowers Dying.—G. T. R., Maryland, writes: "I have a good demand for cauliflowers at the pickling season. My plants often die just before they begin to head. I have nice plants and set them in rich ground. Have tried them in low ground and all other kinds of ground, and cannot raise a satisfactory crop."

REPLY BY JOSEPH:—This letter has been in my hands some time. The inquirer will excuse delay in replying to it. I mistrust that the trouble with the cauliflower is the maggot. Pull up all dying plants by the roots, and burn them, or sprinkle lime over the roots. Then try soaking the roots of the remaining still sound plants with a strong solution of kainite, or muriate of potash, or with strong lime-water.

Ashes and Hen Manure.—Z. W. W., De Gonia Springs, Ind., writes: "I have a lot of good, unbleached wood ashes and hen manure. I would like to know how best to use them for fertilizing wheat. I also have a ton of bone-meal fertilizer. Will it do to mix the ashes and bone-meal, and drill with wheat? Or drill the bone-meal and sow the ashes broadcast? Would it do to drill bone-meal and hen manure together? My land is a heavy loam soil, inclined to run together."

REPLY:—If the ashes, hen manure and bone-meal are all dry and fine, you can mix them and sow them with your fertilizer drill. Mix them just before sowing, as the ashes will set the ammonia of the hen manure free, and it will be lost. If the ashes and hen manure are not in good condition for sowing with the drill, sow them broadcast, separately.

Tanning Pelts.—C. C. M., Collyer, Kansas. Try the following: "Make a strong lather with hot water and let it stand till cold; wash the fresh skin in it, carefully squeezing out all dirt from the wool; wash in cold water till all soap is out. Dissolve one pound each of salt and alum in two gallons of hot water, and put the skin into a tub sufficient to cover it; let it soak for twelve hours, then hang on a pole to drain. When well drained, stretch carefully on a board to dry, and stretch several times while drying. Before quite dry, sprinkle on the flesh side one ounce each of pulverized alum and saltpeter, rubbing in well. Try if the wool is firm on the skin; if not, let it remain a day or two, then rub again with alum; fold the flesh sides together and hang in shade for two or three days, turning over each day until quite dry. Scrape the flesh side with a dull knife and rub well with pumice or rottenstone.

Canada Thistles.—H. P. H., Ridgeburg, N. Y., writes: "The difficulty confronting me now is how to get rid of Canada thistles. They are growing in ground occupied with raspberries, and cultivation only seems to spread them. I cut all stalks before they seed. I had a few plants in a pasture a few years since. I fed apple pomace to my cows right on the spot, and the thistles disappeared. Did the pomace sour the ground and kill the thistles? How can I get rid of morning-glory?"

REPLY BY JOSEPH:—I do not think that the pomace killed the thistles. Probably the cows kept gnawing the stalks or sprouts flavored by the pomace, and choked the life out of the roots. This, indeed, is the proper way of treating thistles—choke them. You can do this by preventing all top growth for one season. Just as soon as the roots throw up a sprout, cut it down. If you do this persistently for one season, the roots will surely die. Good cultivation, which means clean cultivation all season long, is the proper remedy for thistles and other perennials, as it is also for morning-glory.

Smut in Wheat.—A. B. T., Ky., writes: "As I have had some experience with smut in wheat, I will say to those who have it and want to get rid of it, that there is but one sure way of doing it; that is, to send where the wheat is not infected and get a good, clean seed. I had smut for several years in my wheat, and several of my neighbors had the same. We tried what has been recommended in your article, but without good results. Finding that we could not get rid of it, we concluded to change our seed. I sent several miles to get clear out of the infected region, and procured wheat that was entirely free from smut, intending to get clear of it if possible. Unfortunately, however, the man who did the sowing found that he lacked about a half bushel to finish the lot, and without letting me know anything about it, used enough of my wheat to finish. He never mentioned it until we were harvesting. When we got near where he used my wheat we discovered smut, and the nearer we approached the place the more smut. When we reached the line where he sowed my seed, you could tell to the row. It was so plain that we began to talk about it, and the man said he was the cause of it. He lacked such a little he did not think I would ever know it. I think my seed was fully one third smut. I sent back the next sowing season and procured fresh, clean seed, and I have never had any smut since. I would advise

any one that has had it on his land not even to put it in the bins that have had infected wheat in them. I believe that it can be communicated by the thresher."

REPLY:—There is some good reason for the failure of the treatment to rid your wheat of smut. It has been thoroughly tested and found reliable when properly given. Something important has been overlooked. Possibly enough smut remained in the grain sacks to infect the seed wheat. Smut can easily be communicated to wheat from grain sacks, bins or from the threshing-machine. Wheat should not follow wheat in fields that have produced a crop of smutted wheat. Sow clean seed on clean ground, and let rotation of crops clear the old infected fields.

Pickles for Commercial Purposes.—A. E. B., Tolland, Conn., writes: "I would like to know the best way to put up mixed pickles in barrels or otherwise to deliver on a route by the quart or gallon. I would like to be able to put up a good pickle, with and without mustard."

REPLY BY JOSEPH:—Mrs. John Gaillard, of Pennsylvania, has given me a good recipe for pickles. It is as follows: Take from three to five quarts of small cucumbers, two quarts of cauliflowers, one quart of small onions, one quart of green tomatoes, one quart of ground cherries, one quart of string-beans, one bunch of celery stalks, cut fine, some green and ripe peppers and Brussels sprouts; put all in salt water over night. Cook beans and onions separately until tender. Steam cauliflowers, green peppers, tomatoes and Brussels sprouts. Next prepare a dressing of three quarts of vinegar, two cupfuls of brown sugar, one cupful of flour, two tablespoonfuls of turmeric; let come to a boil and pour over the pickles. Heat all together and seal. I think this is an important subject. Perhaps some of our readers can give us other recipes, with and without mustard. I suppose mustard may be added to the ingredients in Mrs. Gaillard's recipe, if desired. The quantities of the various vegetables may also be varied to suit individual preference or the supply at hand.

Bunch Onions in Greenhouse.—F. A. H., Hubbard, Mo., writes: "Will you give me some information about growing onions, for bunching, in hothouse? What variety is best? How thick should they be set when transplanted? How long would it take to mature the crop under glass? What temperature is required, etc.?"

REPLY BY JOSEPH:—I have not much experience in growing bunch onions under glass. Of course, you do not want a "hot-house." A greenhouse of moderate temperature, ranging between 45 and 60 degrees, is all that is necessary. In regard to time of planting, it depends on the time you want the bunch onions. You may, for instance, plant sets of the "American Extra Early Pearl" onions early in October, and have bunching onions by Christmas. Of course, for bunching out of their usual season, the individual bulbs and bunches need not be very large. Hence, you can set the plants very close, say in rows three or four inches apart and one inch in the row; and you can also select the extra early small varieties, like White Queen and even the Barletta. These sorts mature in about two months, from seed. You can sow seed in a flat, and then transplant the seedlings at an early age, to the distances named. When the bulbs begin to get some size, you can begin to pull, taking out every other one in the row, and afterwards every other row, leaving the remaining bulbs to get larger. This is the way I should manage.

VETERINARY.

Conducted by Dr. H. J. Detmers, Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the applicant should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. DETMERS, 35 King Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column, must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances.

An Ox with a Stiff Neck.—A. B. B., Cleburne county, Ark. What you complain of cannot be cured.

Unbilical Hernia.—Mrs. H. L. Phoenix, Ind. Have your colt operated upon by a competent veterinarian, and all will be well.

Protective Inoculation.—H. R. K., Onaga, Kan. Please consult FARM AND FIRESIDE of August 15th, in which all your questions have been answered.

Wants Books.—A. D., Ozone Park, N. Y. Please write to a book-seller in New York, Brooklyn or elsewhere for a catalogue, and make your own choice.

Wishes to Fatten an Old Cow.—H. B., Gardenville, N. Y. Maybe your cow is too old. At any rate, if you want to fatten her, you must stop milking. You can never do so as long as you get all the milk you can.

Will Not Fatten.—W. O. W., Horn Lake, Miss. There must be something wrong in the diet and the keeping of your mare, but what it is does not appear from your letter. It is possible that you feed too much, or in other words, that you give her more food than she is able to digest. If so, a fetid smell of the dung will tell the tale.

Curb.—A. R., Sunbury, O. Exempt your colt from all hard work, especially from riding horseback and from drawing loads up hill; feed the same well with good, nutritious food, and the curb will gradually disappear. Colts frequently are born with crooked legs; that is, with too much angle in the hock-joint. Good and nutritious food in liberal quantities, and rational treatment in general, as a rule, straightens them.

A Small, Hard Swelling.—H. B. M., Oasls, Kan., writes: "I have a seven-year-old saddle pony that has a small, hard lump just above the pastern-joint on his right fore leg. It grows very slowly, and is now about the size of a hickory nut. He does not limp."

ANSWER:—If the small, hard "lump" is above the pastern-joint, it may be a simple exostosis. If it is below, it may be incipient ring-bone. In either case, especially since the animal has not shown any lameness, the best may be to leave it alone. The more you irritate it, the more, very likely, it will grow.

Throat Trouble.—J. F. W., Salina, Pa., writes: "Our cow is in good order and gives lots of milk, but she seems to have some trouble in her throat, especially when she goes up hill. As near as I can describe, it is something like a horse that is windbroken. She has a slight cough; also, her near front teat gathers a fatty substance."

ANSWER:—What you describe may possibly be a case of tuberculosis, and therefore it will

be best to have the cow examined by a competent veterinarian. Do not misunderstand me. I do not say that it is tuberculosis. If I did, the above advice would be unnecessary.

Swelled Leg.—J. T. B., Leeds, N. D., writes: "Last March my mare got kicked just below the gambrel-joint; the leg then swelled very large and broke in four or five places. The swelling did not all go down, but the places that broke are all healed up. What can I do to take down the rest of the swelling?"

ANSWER:—You may effect a reduction of the swelling if you will do what has so often been recommended in these columns; namely, give exercise during the day and keep on a good bandage during the night. You cannot accomplish everything with ointments, salves, etc.

Diseased Eye.—L. D., Leroy, Kan., writes: "What ails my cow? Last spring I noticed her left eye watering, and I thought she had some chaff in it, but it did not get any better. Something seemed to be growing behind it, crowding the eyeball out until the eye was destroyed. There appears to be a tumor in the eye, sticking out as big as a pint cup. There is a bloody, watery discharge. Would she be fit for beef? She is very fat."

ANSWER:—If your cow is otherwise healthy and in a good condition, the diseased eye, or rather the tumor in the socket of the eye, does not at all affect the quality of her beef.

May be Mange.—F. S., Redding, Iowa. What you describe may be mange. If so, give your horse a good, thorough wash with soap and warm water, and then before he is perfectly dry, also thoroughly apply a wash of a two-per-cent solution of carbolic acid in water. While the horse is washed, or drying, outdoors perhaps, thoroughly clean your stable, and disinfect and whitewash the stall. Repeat the wash with the carbolic acid solution and also the thorough cleaning of the stable on the sixth day. A third wash will hardly be necessary, if the first two applications are made in a thorough manner. Harness, brush, curry-comb, halter, etc., also must be thoroughly cleansed.

Polyuria.—C. J. S., Marietta, Ohio. What you complain of—that is, that your horse, though otherwise perfectly well, urinates too often and too much—must have its cause in a decreased activity of the skin. Therefore, it will be advisable to excite the skin to greater activity by frequent and thorough grooming, brushing and rubbing, etc. Polyuria is usually due to feeding musty and dusty oats, but if this is the cause, the horse at the same time loses strength, gets weak, emaciates and finally dies. It is due to a diseased condition, while in your case, it seems, the kidneys simply show increased activity to make up for the decreased activity of the skin. Don't give any more salt-peter.

Swelled Legs.—J. S. C., Rockford, Ala., writes: "Please advise me in FARM AND FIRESIDE, as soon as possible, what is the matter with and what to do for a yearling colt, which ran into a barbed wire fence when he was about three months old and cut both hind legs. Poison was supposed to be in the wounds, as the legs swelled and have been swollen since. The wounds healed immediately after they were made, but the swelling remained. The left hind leg is affected in the main joint and the right hind leg in the thigh."

ANSWER:—The case you describe is an old one, and I am afraid not much can be done. The only rational way to reduce such a swelling is by judicious bandaging, and then applying gentle pressure.

Collar Boils and Tumors.—H. W. H., Ridgely, Md., and L. F., Versailles, O. Collar boils are caused by undue pressure upon the affected part; consequently, by collars that are too large, too small, or ill-fitting, and therefore do not properly distribute the pressure, but throw too much upon one point. Consequently a cure is possible only if the affected part is relieved—that is, altogether exempted from pressure—and a cure can never be effected if, as is usually done, the pressure is increased by the use of pads, etc. Therefore, instead of using the latter, a cavity should be made in the stuffing of the collar so that the sore and affected part is not touched, or else a well-fitting breast collar should be substituted. Old and inveterate cases require a surgical operation, and consequently need the attention of a qualified veterinarian.

Probably a Stifle Gall.—W. H. K., Ludington, Mich., writes: "What is the matter with my colt? He is a little over one year old and has had swellings on his legs just below the stifle-joint for the last seven months. At first they would come and go, never larger than a hen's egg. Two months ago I turned him on pasture, and the bunches are now the size of your two fists; they are soft, as though filled with wind. He is not very lame, but seems stiff in his hind parts; he is very poor, and has not quit shedding his coat."

ANSWER:—What you describe seems to be a so-called gall of the knee-joint. The same sometimes grow to an enormous size, and do not easily yield to any treatment. Since your animal is only a colt, you may possibly succeed in effecting a reduction by continued daily applications of tincture of iodine. The best thing to do would be to consult a veterinarian who can see and examine the animal.

A Queer Ailment.—W. A. L., Lima, Ohio, writes: "My driving-horse was hurt in the shoulder by work in harrowing. Matter gathered; the swelling was opened twice and finally healed; afterwards it gathered again. I put medicine on to drive it away, and drove it to the nose or face, between the eye and nostril. I drove it back and forth several times. Then I had it roveled and cut open on the shoulder, which cured it for a time, but it returned. After a repetition of this it has finally gathered on the nose, breaks, runs out, heals and gathers again. The horse remains fat and sleek as before, and seems as well as ever."

ANSWER:—What you describe, provided the description is correct, must be a queer ailment. I never have seen nor heard of a case in which abscesses run from the shoulder to the nose, and vice versa. The only advice I can give you is to have the horse examined by a competent veterinarian.

Brittle Hoofs.—J. B. T., Ozeana, Va., writes: "The outer and inner portions of the feet of my colts (aged respectively two and four years) do not unite firmly, the former being rather hard, the latter somewhat spongy. The older colt has been shod several times, but this does not seem to help. When their feet get long, the outside breaks, leaving the inner exposed."

ANSWER:—There must be something radically wrong in the treatment of your colts' hoofs. The same either are too much exposed to wet and mud, or else the lower border of the wall of the hoof is not sufficiently worn off by exercise—is not trimmed often enough. As to the older one that has been shod several times, it may be that the shoes have not been reset when necessary; that is, once every four weeks. Keep your colts on dry ground, trim the lower border of the wall whenever it begins to grow too long, avoid poulticing and stopping, and there is no

doubt everything will be well. If the colts are stabled, the floor on which they stand must be kept dry and clean. The moisture required by the hoof must come from within and not from the outside.

Paralysis.—W. H. C., Dobyville, Ark., writes: "I have a sow that has what we call kidney disease. She is down in her loins, and drags her hind parts."

ANSWER:—The paralytic affection of your sow may have several causes. In the first place, it may be due to trichinosis—incurable. Second, it may be due to serious morbid changes in the spinal chord—also incurable. Third, it may be due to morbid changes in the membranes of the spinal chord—very little prospects of improvement. Fourth, it may be caused by a diseased condition of the vertebrae—poor prospect of improvement. Fifth, its cause may consist in a degeneration of the muscles—also unfavorable prognosis. Sixth, it possibly may be caused by insufficient nutrition or by rachitis—slight prospect of improvement if the thorough change in the diet of the animal can be made. The kidneys do not control the movements of the hind quarters. Their office is the secretion of the urine. In certain cases of paresis, or paralysis of the hind quarters, the kidneys may be secondarily affected, but do not constitute the seat of the primary disease.

So-called Black-leg, or Symptomatic Anthrax.—C. E. S., Lyle, Wash., and Ch. N., Bethune, Col. You both describe cases of so-called black-leg, a well-known and most fatal disease among young cattle. Animals once affected but seldom recover. As means of prevention, stubble-fields for pasture and stagnant water for drinking should, if possible, be avoided. The micro-organism which causes the disease, it seems, finds an entrance into the animal's body through small sores and wounds. That places in which black-leg makes its appearance every year must be avoided by young cattle, is self-evident. The best and most thrifty animals in a herd are usually affected first. Hence, it has been considered advisable not to feed too much highly nutritious food, and also to slightly acidulate the water for drinking with some acid (sulphuric or hydrochloric). A change of pasture, especially to one that is high and dry, and in which nothing exists that is able to cause small sores or wounds in feet, legs or mouth, is often followed by a cessation of any further attacks. Places that have been occupied by very sick animals, or where the latter have died, or been buried, should be thoroughly disinfected, or at least, be avoided by other healthy animals. Young cattle may be made immune, and consequently be protected, by a protective inoculation, but the latter can be performed only by an experienced bacteriologist.

Probably Actinomycosis.—J. G. E., Madisonburg, Ohio, writes: "I have a Jersey heifer, three years old, which has a lump about the size of a man's fist on the right side of her under jaw, about the middle. It has been growing about three months. When first noticed it was about the size of a hickory nut, and was apparently loose and hard under the skin. It grew till it was the size of a hen's egg when it broke, and has been running more or less for weeks. Upon examination I found that the lump was soft at the point where it runs, but back at the root it is hard and seems to be growing fast to the jaw-bone. It seems nothing more than natural flesh. There is no skin drawn over it; it protrudes through and the skin seems to be drawn back; it probably sticks out three inches from the jaw-bone. The cow is in a healthy condition otherwise, and gives two gallons of milk a day. Will it do to continue using her milk? Do you think the cow is in a healthy condition at this time, as long as it has been standing? Would it do to beef her? Do you think the meat would be in a fit condition for market? Would you call it diseased meat two months from now, should we conclude to fatten her, or would it be better policy to shoot her and bury her? She is a very fine animal, and would rather have her cured if possible."

ANSWER:—What you describe seems to be a case of actinomycosis. For further information, treatment, etc., I have to refer you to a former number issued a few months ago. As to your special questions, actinomycosis is a local disease; consequently, as long as the animal is not emaciated, there can be no objections whatever to the use of the milk or the meat. Even if emaciation should have set in on account of the interference of the tumor or tumors with the process of eating, it cannot be proven that the meat is injurious, though it may not be palatable, because not a solitary case is on record in which the disease has been communicated to a human being by the consumption of meat or milk.

THIS PAPER One Year Free

To any one sending us only one NEW yearly subscriber at the regular price, 50 cents, for the paper alone.

This offer is good now under the following conditions:

The NEW subscriber must be a person whose name is not now on our list, and must be a person whom you have sought out and solicited to take the paper and who has consented to receive it. A change from one member of a family to another is not securing a NEW subscriber.

The new subscriber will receive the paper a full year for the regular subscription price, 50 cents, but will not be entitled to any present or premium with it except upon payment of the full "Price, including one year's subscription." For example: Premium No. 539, Perfection Hammock, and this paper one year for only \$1.50; or, "Uncle Tom's Cabin" and this paper one year for 60 cents.

Send us a new subscriber under these terms and we will send you the paper free for one year as your reward.

This offer must not be combined with any other, and applies to this paper only.

Accept it now, while it is good. It may be withdrawn.

We have an office at 927 Chestnut Street, Philadelphia, Pa., also at Springfield, Ohio. Send your letters to the office nearest to you and address

FARM AND FIRESIDE,
Philadelphia, Pa., or Springfield, Ohio.

COOPER'S
SHEEP DIP.

Cures Scab. Kills ticks and lice. Improves both sheep and wool. \$2.00 packet makes 100 gallons. Order of F. S. BURCH, 178 Michigan St., Chicago.

Our Miscellany.

SOUTHERN CALIFORNIA now adds a glacier to its list of attractions for tourists. It is a mile in length, two hundred feet deep, and is to be found away up on a mountain of the San Bernardino range.

Boys' and girls' bicycle free! On easy conditions, without one cent of money. Write us to-day if you want one. Address Western Pearl Co., 334 Dearborn Street, Chicago, Ill.

BIGGS—There goes a man that I never feel like judging from the company he keeps.

Beggs—Why so? He doesn't look any better than the rest of mankind.

Biggs—No; but you see, he's the warden of our prison.

THE sprouts that appear on the trunk and branches of fruit-trees should be cut out as soon as seen, unless they are desired to take the place of older limbs that are to be cut out. They only serve to weaken the tree and take from it the sap that should go toward making up the legitimate growth of branch and fruit.

It is estimated by various writers that an acre of good corn, well made into silage ought to make, in winter, eighty-five dollars' worth of milk at two and a half cents a quart. This amount would vary considerably with cows, but it is unquestionable that silage is the most profitable form in which corn can be used for making milk.—*Jersey Bulletin*.

A GERMAN authority says that almost a third of all humanity, that is, 400,000,000, speak the Chinese language. Then the Hindoo language is spoken by more than 100,000,000. In the third place stands the English, spoken by almost 100,000,000. Fourth, the Russian, with 89,000,000, while the German language is spoken by 57,000,000 tongues, and the Spanish by 48,000,000. Of the European languages the French is fifth in place.

LET the grain of ensilage corn begin to glaze before cutting. Put it in the silo free from either rain or dew. Do not pack hard nor fill too rapidly, giving time for the temperature to rise to 125° or 130°. Do not put weight upon it, but cover with tar-paper over boards and two or three feet of hay or straw. Build the silo of wood, and on the ground, not in it. Feed in connection with other foods, mixing with it whatever grain, oil-meal or bran is to be fed. There is a good deal more sense in these new methods than in the old ones, and we say, try ensilage, with the same degree of moderation, care and judgment that should govern in all experiments.—*Farm Journal*.

THE BALL-BEARING, PNEUMATIC SULKY.

The first day of the spring meeting of the Worcester Park Driving Association, Wednesday, June 7, will be memorable as having introduced to the public a sulky which is destined to reduce materially the time of trotters. The horse Albert D., was driven to a sulky with 28-inch hickory wheels, with 1½-inch Columbia pneumatic tires and ball bearings. He won four straight heats, but was set back in the second for running. The times of the heats: For the first, 2 m, 31 s; second, 2 m, 36 s; third, 2:30¼; fourth, 2:29¼.

The track is one half mile long, and was heavy. Albert D. has never before beaten 2 m, 35 s in public.

The last heat was desperately contested, and everyone who saw it was satisfied that the pneumatic sulky alone saved the race. The vehicle was roundly ridiculed before the start, and at the finish there was a decided disposition to protest against it as giving an unfair advantage. Orders for these sulkies were offered the builder before he left the track. The two or three horse owners who have tried the vehicle in private are enthusiastic over it, and declare that in a mile or a half mile track it is four to six seconds faster than an ordinary sulky, and about two seconds faster on a mile track.

The advantages of this vehicle are in the ball bearings, in the absence of vibration, and above all in the remarkable steadiness going around the turns. There is no side slip, and the driver, not being obliged to look out for a precarious seat and balance, can devote all his time to driving the horse.

There were nine contestants in the race, and at the beginning Albert D. was by no means a favorite. We look to see this sulky debarred from future races on account of its manifest advantages. If so, it will be one more triumph for cycling. One horse in private trials has improved his record six seconds by using this sulky, which is four pounds over weight. Others now being built will be better contrived and constructed, the one used at Worcester being merely a sort of makeshift.—*Bicycle World and L. A. W. Bulletin*.

THE CULTIVATION OF BEAUTY.

Beauty is not altogether an accident. It may be cultivated. We have been cultivating it, more or less unconsciously and by a variety of methods, this long time past. In comparison with any earlier age, ours may be fairly described as a hygienic one. Now, the relations between hygiene (the science of healthy living) and physical beauty need not, I think, be greatly insisted upon. Let us step into the school-room. Beauty of the higher order is very closely connected with brains. Brains seem too much wanting in earlier feminine portraiture, because education has made us

conscious of that defect. We are no longer quite satisfied with a beautiful face that shows no trace of mind. We begin to perceive that this is a mere exquisite mask. But the higher kind of beauty is becoming much more general among our women because we are becoming much more careful of their mental training. The wealthy tradesman who is wise sends his girls to be gently and politely taught. The result is that he himself is scarcely to be recognized as the grandfather of his grandchildren.

Physical beauty may be made in the school-room. Then let us turn to the play-fields. Never were our girls so active or so varied in their pastimes as they are to-day. They are good at the oar, they are great cyclists, they are not easily beaten in the tennis court, they begin to be skilled at the wicket. Athletics make for physical beauty in an incalculable degree. There is more beauty now than ever before, and there are reasons for it. And because there is more beauty than ever, there is, perhaps, not so much enthusiasm about it. And, again, the beauties of the next generation will be much more beautiful than ours.

CHILDREN'S ENGLISH.

However important it may be that children early acquire a certain knowledge of their own language is a matter of great importance.

It is astonishing how indifferent many well-educated people are on this point, evincing their negligence by the thoughtless way in which they select nurses for their children.

When a child is left to the care of a nurse for the greater part of the day, it is important to select one who speaks as good English as possible, for children are naturally imitative, and are ready to catch up accent, tone and manner of speaking more quickly than their elders. Parents should be quick to recognize and correct faults in grammar. Children are frequently very careless about their plurals, and especially in the use of the verbs. "Where is my shoes?" comes from the lips of a child, who will go on making the mistake because it has never been corrected.

There are various words and expressions often caught from older persons, which ought to be corrected immediately: "Ain't it," "goodness gracious," "mercy sakes," and the frequent repetition of the word awfully, where it is a misuse of the word.

The child's voice should receive the most careful attention. How often we are startled at hearing a high-pitched or a coarse, loud voice from a refined-looking girl or woman.

It means a lack of care and attention bestowed upon the child by those who should have striven to correct it, for there is nothing more grateful or pleasant to the ear than a low, sweet voice in a woman.—*The Household*.

MILK POWDER.

THE recent invention of a German agriculturist is attracting attention as a convenient substitute for condensed milk. He claims to have solved the problem of preserving milk in a solid state for an indefinite period. His milk powder, specimens of which have been exhibited at agricultural exhibitions in Germany, is prepared from skim-milk, and it is said to contain about thirty per cent of albuminous matter, or about seven per cent more than meat of good quality. The powder is easily soluble in four or five parts of hot water, and can be used with great ease for the preparation of cocoa and other beverages, or incorporated with potato flour for confectionery purposes and the like. In case the invention turns out to be all that is claimed for it, this will create an increased demand for milk and inaugurate a new industry that cannot but prove advantageous to the farmer.—*Farm, Field and Stockman*.

THE USE OF WORDS.

There are supposed to be about three thousand living languages. Doubtless many of them are very poor in words. Although in our own language there are a great many more than one hundred thousand words, yet only about thirty thousand are in daily use. Shakespeare made use of fifteen thousand, and the diction of those who have the usual degree of education that passes muster among us, comprises only about three thousand words, thus showing how small a number are actually required.

DON'T TOBACCO SPIT YOUR LIFE AWAY

Is the startling, truthful title of a little book just received, telling all about *Notobac*, the wonderful, harmless, economical, guaranteed cure for the tobacco habit in every form. Tobacco users who want to quit and can't, by mentioning FARM AND FIRESIDE can get the book mailed free. Address THE STERLING REMEDY CO., Box 763, Indiana Mineral Springs, Ind.

TALKS TO CHILDREN ABOUT JESUS. One of the most popular books ever published. Sells at sight. Credit given. Freight paid. Best book for the Holidays. AGENTS WANTED also for other books and Bibles. R. H. Woodward & Co., Baltimore, Md.

SPAVIN, SINEW STRAIN, RINGBONE, SPLINT, BOG spavin, windgalls, curb, etc., permanently cured with out scar by Dare's Hindoo Ointment. Sent by mail, with instructions, for \$1. Franklin Dare, Druggist, Bridgeton, N.J.

Asthma The African Kola Plant, discovered in Congo, West Africa, is Nature's Sure Cure for Asthma. Cure Guaranteed or No Pay. Export Office, 1164 Broadway, New York. For Large Trial Case, FREE by Mail, address KOLA IMPORTING CO., 132 Vine St., Cincinnati, Ohio.

"KEYSTONE" Corn Husker and Fodder Cutter



Husks the corn and cuts the stalks into the best fodder known. A wonderful machine. A perfect success. Much improved for 1892. See it at the principal fairs, or send for our FREE book, "The Great Leak on the Farm."

KEYSTONE MFG. CO.,

STERLING, ILL.

KANSAS CITY, COUNCIL BLUFFS, ST. LOUIS, COLUMBUS, O.

FREE FOR THIRTY DAYS.—Send us at once a photograph or a tintype of yourself, or any member of your family, living or dead, and we will make for you one of our finest \$25.00 life-size CRAYON PORTRAITS absolutely free of charge. This offer is made to introduce our artistic portraits in your vicinity. Put your name and address back of photo., and send same to Tanqueray Portrait Society, 741 DeKalb Ave., Brooklyn, N. Y. References: Rev. T. DeWitt Talmage, all newspaper publishers, Banks, and Express Companies of New York and Brooklyn.

ENGINES AND BOILERS

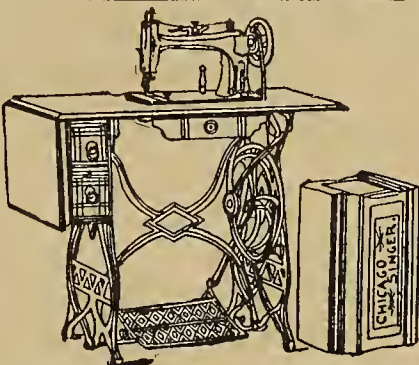
UPRIGHT & HORIZONTAL, Stationary, Portable and Semi-Portable. From 2 HORSE POWER upward.

Specially adapted and unexcelled for GENERAL FARM WORK affording Best Power for Least Money. Over 4,500 in Successful Use. Get our Free Pamphlet and let us bid on your wants. Address

JAMES LEFFEL & CO., SPRINGFIELD, OHIO, or 110 Liberty St., N. Y. City.

Mention this paper when you write.

HARTSHORN'S SELF-ACTING SHADE-ROLLERS Beware of Imitations. NOTICE OF AUTOGRAF OF STEWART HARTSHORN ON LABEL AND GET THE GENUINE HARTSHORN.



WORTH \$55, AT \$12.98.

To inaugurate our new Sewing Machine Department, we offer a regular \$55 Chicago Singer Sewing Machine, with all the latest improvements and full five-years' guarantee, for \$12.98.

MAIL ORDERS PROMPTLY FILLED.

Our establishment is the largest in New York. Mail Order System one of the most perfect in America. Our Fall and Winter FASHION CATALOGUE containing full descriptions, illustrations and prices of hundreds of articles that can be bought by mail, sent FREE to any address.

BLOOMINGDALE BROS., 3rd Ave., Cor. 59th St., New York City.



"REMARKS"

By BILL NYE.

\$2.50 Book, the Largest and Funniest ever Printed, **FREE**

To any one sending only \$1 for both Farm and Fireside and Ladies Home Companion for one year. Or, if preferred, we will send either journal for two years to one address, or for one year to two different addresses. This book has 504 large, clearly-printed pages, with 159 choice illustrations of the exquisite humor and keen wit of the author, and is bound in a handsome, illuminated cover. "Bill Nye" is the greatest humorist living, and this book is the best collection of his writings ever published. It is sold by subscription for \$2.50, but we will mail one volume to any one accepting this offer. Or, to any one sending us only 2 subscribers to either paper.

Price, including one year's subscription to this paper, 75 cents.

We offer it for sale for only 50 cents. Postage paid by us in each case.

Order by premium No. 838, and address all orders to

FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

FREE TO ALL Either VIOLIN, GUITAR, BANJO or MANDOLIN player's Guide Well worth \$1. Ad. C. A. LOHMAN, St. Louis, Mo.

BUY YOUR GOODS DIRECT.

Send us your orders for anything you may need, large or small, and we will guarantee to save you from 10 to 50 per cent. We have experienced shoppers for both sexes. All kinds of Machinery and repairs as well as Dry Goods. Satisfaction guaranteed. Write for prices. **KEYSTONE PUR. AGCY.,** Room 501 Girard Building, Philadelphia, Pa.

Introduction

PRICES.

Vane and 8 Foot Wheel Complete - - - \$30.00
34 Foot Tower - - - 22.00
Iron Force Pump - - - 14.00

Delivered free of freight. Send stamp for catalogue. Agents wanted.

THE BUEL MFG. CO., Akron, Ohio.

GOLD PLATED WARRANTED GENUINE. BOX JOINTS. Don't buy a common looking silver watch when you can now obtain for the small sum of \$4.95 a handsome genuine 14 karat gold plated hunting case, full engraved watch with a first class full jeweled movement, a perfect time keeper, genuine full plate handsomely damasked and ornamented, fully equal in appearance to the watches regularly sold by jewelers at from \$25 to \$55. In carrying this watch you have the credit of carrying a solid gold watch, as the plating process is got down so fine now-a-days that it is almost impossible to detect the difference. The engraving on the case is just the same as on the high priced watches, and is in the very loveliest and latest patterns. Some will doubt our ability to be able to supply such a watch at this price, and to convince you that we mean just what we say, we make the following most extraordinary offer for next 30 days. **READ!** Cut this out and send it with our order, and we will promptly ship the watch to you by express C. O. D. with instructions to the express agent to allow you to examine it at the express office. If on examination you are convinced that it is a bargain, pay the agent \$4.95 and the express charges and it is yours, otherwise you pay nothing and it will be returned at our expense. We could not afford to make such an offer as this unless we were confident that the watch will not only please you, but be a surprise to you. Bear in mind this price will be for 30 days only. **THE NATIONAL MFG AND IMPORTING CO.,** 334 Dearborn St., Chicago, Ill. Mention this paper when you write.

Smiles.

"Young man, be warned in time,
And do not put away that overcoat,
Even in the keeping of thy uncle!
What signifies a spring-like day in May?
'Tis but a weather breeder. At a time
When least thou dost expect it, a cold wave,
Fresh from Winnipeg and Minneapolis,
Will come, perchance, and find thee unpre-
pared,

Thy overcoat in soak, the pawn check safe
Within some pocket of that other vest
Thou lefst home a dozen miles away,
Thy heavy nndergarments in the wash,
And there thou art, blue-nosed and shivering,
Like some shorn lamb to whom the wind has
not
Been tempered, while above the roaring blast
Thy knocking knee-bones and thy chatt'ring
teeth
Are heard, and through thy pale and wan
mustache

The wud a mournful requiem doth howl!
O giddy youth, the voice of wisdom heed,
And hang onto that summer overcoat!"

ANOTHER CASE.

In a hammock, in the orchard,
Swung I with my darling Grace;
There was danger of her falling,
So I held her 'round the waist.

Just above a rosy apple
Hung quite fast upon the tree.
"See that apple, dearest Charlie?
Get it, then," said Grace to me.

So I swung the hammock higher,
Reached—ah, it's another case;
For just then I lost my balance
And, like Adam, fell from Grace.

—Judge.

ONE THING OVERLOOKED.

AN English exchange relates how that
a delegation of strikers visited a
mill proprietor, and after demand-
ing forty-four hours per week, at
the same old pay, the dismissal of
an obnoxious manager, a little light
refreshment in the middle of each
afternoon, no new
hands to be employed
until they (the workmen) had said they were
willing to work with them, a fortnight's holi-
day and double pay once a year, the following
took place:

"Exactly. What more?"
"That is all, sir, at present."
"No, it isn't. Think again. I'm sure there's
something else."
"No, sir."
"Well, I'll just tell you, then. You've ar-
ranged your hours of work?"
"Yes, sir."
"You've managed to have the manager dis-
missed?"
"Yes, sir."
"And the refreshments and the holidays,
and the other matters you've mentioned?"
"Yes, sir."
"But you've forgotten one thing, and that is
to arrange to get some fool to pay your wages
on a Saturday, for I won't. Good-morning."

UNMERITED INDIGNITY.

"Madam," said the tramp, a flush of out-
raged pride dyeing his variegated cheek, "I
am aware that my appearance is against me.
I look like a vagabond in whose bosom there
does not linger a vestige of the dignity and
self-respect that are inseparable from matnre
and well-balanced manhood. I have stooped
to ask for charity. I have humbly craved the
boon of a plate of cold victuals to satisfy the
gnawings of a stomach that has been a
stranger to food for six or eight hours —"

He stopped a moment, passed his hand
across his eyes, and proceeded again:

"I have crushed back and trampled upon
my pride in order to still the cravings of a
terrible hunger that I hope you may never
experience, but if you think you can work off
a half section of a factory-made rhubarb pie
on me, madam, you have made the mistake
of your life. I have the honor, madam, to
bid you good-morning."—Chicago Tribune.

NO JOQUE.

An editor of a newspaper in one of the
western states, called the Rocky Mountain Cy-
clone, opened the first article of its number as
follows: "We begin the publication ov the
Rocky Mountain Cyclone with some phew diph-
iculties in the way. The type phonnder
phrom whom we hought the outphit phor this
printing ophis phailed to supply any ephs or
cays, and it will be phour or phive weex be-
phore we can get any. We have ordered the
missing letters and will have to wait until
they come. We don't lique the idea ov this
variety ov spelling any better than our read-
ers, but mistax will happen in the best ov
regulated phamilies, and iph the cs and exes
and qus hold out, we shall ceep (sound the c
hard) the Cyclone whirling aphter a phashion
till the sorts arrive. It is uo joque to us; it is
a serious aphaifr."

WHAT LOVE WILL DO.

Pauline—"Is it not kiud of Algernon to
send me such beautiful flowers?"
Cora—"Yes, and so unselfish of him, too,
dear. I noticed last evening that he is still
wearing his winter clothing."

AFRAID OF THE YANKEES.

Mr. Isaacstein, of New York, returned home
very late one night, and Mrs. Isaacstein
asked:

"Shakey, where you got all dot tobacco
stain on your shirt front?"

"Blaying draw boker mit three sheutle-
mens from New Englaut, Rachel."

"Vell, couldn't you turued your head to one
side ven you spit?"

"Not mit dose fellers."—New York Sun.

LOST.

Benevolent old gentleman—"What's the
matter, my little mau?"

Tattered Tom—"Boo-hoo! I've lost the dime
me mother gave me ter buy some bread!"

Benevolent old gentlemen—Well, never
mind, here's another dime for you. Where
did you lose it?"

Tattered Tom—"Jest around the corner,
shootin' craps wid Micky the Mug. I don't
believe he played square."

BUSINESS IS BUSINESS.

"I tell you," he said, disconsolately, "wom-
en are altogethor too busiuesslike now-
adays."

"What's the matter?"

"I proposed to the heiress yesterday."

"Did she accept you?"

"No. She took out her note-book, wrote my
name and address in it, and said she would
consider my application."—Washington Eve-
ning Star.

TOO MUCH LUNG.

Young wife—"My dear, the first time I saw
you, you were with a party of students giving
the college yell."

Husband—"Yes, I remember."

"And I noticed what a remarkable voice
you had."

"Yes, you spoke of it. Why?"

"Nothing, only I wish the baby hadn't in-
herited it."—New York Weekly.

UNPLEASANT IMAGINATION.

Temple Kortright (her affianced)—"And
while I am slaving here in town, you will
sometimes think of me?"

Mary Clausen (leaving town for the sum-
mer)—"Yes, Tempy, darling. When I take a
mooulight drive or a stroll along the beach
with the other men, I shall imagine each one
is you. I'm sure no girl could do more than
that!"

THE BURNING QUESTION.

Elderly strauger—"How do the people in
your section of the coutry regard the tariff
and silver questions, sir?"

Suburban resident—"We haven't studied
'em much—the servant girl question is occu-
pying all our attention just now!"

DIFFERENT.

Purchaser—"What is the price of coal now?"

Dealer—"Five dollars and a quarter a ton."

"Weigh me out a ton, please."

"Ahem, where the coal is weighed in the
presence of the purchaser we charge a dollar
extra."—Westfield (Pa.) Leader.

SUBSTANTIAL CREDIT.

Hobbs—"I think young Smith deserves a
lot of credit for keeping up so fine an estab-
lishment on so small an income."

Dohbs—"Well, he gets it. He owes pretty
nearly everybody around town."

RATHER HEARTLESS.

Little Dick—"School-teachers hasn't any
feeling at all."

Mamma—"What is the matter now?"

Little Dick—"My teacher borrowed my new
knife to sharpen her pencil so she could give
me a demerit mark."—Street & Smith's Good
News.

A NEW BRAND.

"What a splendid color Miss Jones has,"
said Chollie.

"She has indeed," said Miss Senvius. "She
must have discovered a new druggist."—New
York Press.

HOME STUDY. Thorough and practical in-
struction given by Mail, at
Student's Home, in Book-keeping, Busi-
ness Forms, Penmanship, Arithmetic,
Letter Writing, Grammar, Shorthand, etc. 7 Years'
Success. Students and references from every State.
All ages taught. A Trial Lesson and Catalogue free.
Bryant & Stratton, 449 Main St., Buffalo, N. Y.

BICYCLES GIVEN AWAY
For a few hours active labor. Send 25c.
for "The Modern Queen," 16 pages, 64
column illus. Magazine, 6 mos. on
trial and full particulars. Modern
Queen Co., 106 Center St., New Haven, Ct.

**GUARANTEED CURE
OR NO PAY.**

Nothing Fairer Than This.
When we say cure, we do not mean simply to
stop it for the time being, but a

PERMANENT AND POSITIVE CURE
For Rheumatism, Neuralgia, Dyspepsia,
Headache, Constipation, Biliousness, Ner-
vousness, Sleeplessness, Impure Blood,
and all diseases arising from a disordered
Liver. Write for Treatise, Testimonials, and
Free Sample Bottle of

**DR. ROC'S LIVER, RHEUMATIC,
and NEURALGIA CURE to**
CULLEN & NEWMAN,
136 GAY ST., Knoxville, Tenn.

LADIES WHO WILL DO WRITING

The tremendous sale of my preparation,
Gloria Water, has so increased my
correspondence that I will guarantee good wages to ladies who will do writing for me at home. Address
in own handwriting MISS EDNA L. SMYTHE, Box 1101, South Bend, Ind. Mention paper.

WILL MAKE GOOD WAGES.

CAMPAIGN BADGE, gold plated, Card Agt's Outfit
& Present 4c. Tuttle P. Co., No. Haven, Ct.

CARDS WE LEAD IN LATEST STYLES AT LOWEST PRICES.
FANS, BASKETS, LACE EDGE CARDS, Etc. SAM-
PLES 2c. CLINTON BROS., CLINTONVILLE, CONN.

500 SCRAP PICTURES, AUTO, VERSES & RIDDLES
IN STYLES OF CARDS 2c. & PRESENT
FADDE & CO., MONTWELL, CONN.

CARDS LATEST STYLES, FINEST GOODS, LOWEST
PRICES. 6c. PREMIUMS. SAMPLE
JEWEL CARD CO., CLINTONVILLE, CONN.

YOUR NAME on 25 Latest Style Cards, 1 Ring, 1 New Four-
tain Pen, Scarf Pin, Watch Chain, Col-
lar Button, Cuff Buttons, and our new POPULAR MONTHLY
3 mos., all for 10c. & 2c. for postage. CLINTON BROS., CLINTONVILLE, CONN.

Ohio Electric Co., Cleveland, want agents. Cat. free.

YOUR NAME ON 25 LATEST STYLE CARDS
Verses, 1 Ring, 1 Pocket Pencil, 1 Fountain Pen, 1 In-
stant Handkerchief, STORY PAPER 3 MONTHS, and
Agent's New Samples, all 10c. CLINTON & CO., North Haven, Conn.

CUT THIS OUT and send with your name and express
office address and we will send you free
to examine and wear, a SOLID GOLD finished watch that you can sell for
Ten Dollars. If it suits, you send us Four Dollars and express charges;
if not, return it to me. Mention whether Ladies' or Gents' size is desired.
W. S. SIMPSON, 37 College Place, N. Y.

MANAGER WANTED—To take charge of Branch House in
each State. Address Fred De Haven, Louisville, Ky.

RUBBER STAMPS. Best made. Immense Catalogue Free
to agents. The G. A. HARPER Mfg. Co., Cleveland, O.

WATCH FREE—If you want one send a stamp to the
National Illus. Magazine, Washington, D.C.

6th and 7th Books of Moses, Alburttus Magnus,
Long Lost Friend, Mineral Rods and Dip
Needles. B. G. Stauffer, Bachmanville, Pa.

QUIT AR self-taught without notes; 24 charts 50c
BANJO without notes (60 pp., 100 pieces) \$1.
Cir. & cat. of inst's free. E. O. HOWE, 85 Fifth av, Chicago

CUT IN TWO Prices of Sewing Machines, Safes, Scales,
Blacksmith's Tools, Road Carts, Buggies,
Harness and 1000 other things. List Free.
CHICAGO SCALE CO., CHICAGO, ILL.

BEST PAYING THING for Agents is our PHOTO-
GRAPH FAMILY RECORD PICTURE.
We give you liberal terms. Address Dept. W
C. P. CORY & CO., 41 to 45 Jefferson St., Chicago.

PLEASANT, profitable employment is of-
fered every energetic person in introduc-
ing our world-famous picture, "Columbus
at the Royal Court of Spain," in their
neighborhood. See our offer on next page.

AGENTS WANTED ON SALARY
or COMMISSION, to handle the New
Patent Chemical Ink Erasing Pencil. Agents making
\$50 per week. Monroe Eraser Mfg. Co., x98, LaCrosse, Wis.

NOVELTIES AGENTS
Convertible Wire Baskets, Handy Button, Self-
threading Needle & many others. Catalog sent free
V. Cassgreen Mfg. Co., 134 Van Buren St., Chicago, Illinois

CUT THIS OUT and return it to us
with 10c silver or
stamps, and we will
send you a name
insert in our
Agents' Directory. You will get thousands of Papers,
Cards, Magazines, Novelties, etc., from publishers and man-
ufacturers who want agents. DON'T MISS THIS. Address
WESTERN MAIL CO., St. Louis, Mo.

AGENTS Coin Money selling
Beveridge's Automatic
Cooker. Every woman
buys. Best and cheapest
cooker sold. Big Profits to good workers, male or
female. Sample's weight 12 oz. Adv'g matter furnished
For circulars address W. E. BEVERIDGE, Baltimore, Md.

A GOLDEN OPPORTUNITY
To sell TREES HONESTLY and MAKE MONEY.
FIRST-CLASS MEN will receive terms by addressing
J. HAMMOND, Nurseryman, Geneva, N. Y.

WE WANT YOU
To act as our agent. We will treat you well and pay
liberally for your services. The work is easy, pleasant
and adapted to both young and old of either sex.
GEO. STINSON & CO., Box 154, PORTLAND, ME.

CONSUMPTION
(except last stages), CATARRH, BRONCHI-
TIS, ASTHMA, and all Diseases of the Lungs,
surely cured by the New Andral-Broca Dis-
covery. Not a Drug, but a New Scientific Method
of Home Treatment. Cures Guaranteed. Sent
FREE to all who apply. Try it FREE, and pay
if satisfied. State age and disease in full. Address
NEW MEDICAL ADVANCE, 62 E. 4th St., Cincinnati, O.

A PRESENT.

SEND us your address and we will make you a
present of the best Automatic WASHING
MACHINE in the World. No wash-board or rub-
bing needed. We want you to show it to your friends,
or act as agent if you can. You can COIN MONEY.
We also give a HANDSOME WATCH to the
first from each country. Write quick. Address
N. Y. LAUNDRY WORKS, 80 Murray Street, N. Y.

TAKE AN AGENCY FOR

W. A. DAGGETT & CO
Vinceland, N. J.
Boston, Mass.
Chicago, Ill.
Atlanta, Ga.
Salt Lake City,
Oakland, Cal.

Best Utensil
in the universe.

**\$30 to \$50
A
WEEK**
I WANT an honest, earnest
man or woman in every coun-
ty to take the sole agency
for an article that is needed
in every home and indis-
pensable in every office.
SELLS AT SIGHT, in
town or country. You can
make \$700 in three
months, introducing it, after which it will bring
you a steady income. Splendid opening for the
right person. Don't lose a moment. Good jobs
are scarce and soon taken. Write at once to
J. W. JONES, Manager, Springfield, Ohio.

**How TO MAKE
A
Fortune**
WANTED—Salesmen who can easily make \$25 to \$75 per
week, selling the Celebrated Pinless Clothes Line or the
Famous Fountain Ink Eraser; patents recently issued.
Sold only by salesmen to whom we give EXCLUSIVE TER-
ritory. The Pinless Clothes Line is the only line ever in-
vented that holds clothes without pins—a perfect suc-
cess. The Fountain Ink Eraser is entirely new, will erase
ink instantly, and is kind of all. On receipt of 50c. will
mail sample of either or sample of both for \$1, with cir-
cular, price-lists and terms. Secure your territory at once
THE PINLESS CLOTHES LINE CO., 169 Hudson Street, Worcester, Mass.

**\$5 to \$15 per day, at
home, selling
LIGHTNING PLATER**
and plating jewelry, watches
tableware, &c. Plates the
finest of jewelry good as
new, on all kinds of metal
with gold, silver or nickel.
No experience. No capital.
Every house has goods need-
ing plating. Wholesale to
agents \$3. Write for cir-
culars. H. E. DELNO &
Co., Columbus, O.

You need work.
(If not this adv. does not interest you)

You can make \$75 to \$250 a month,
provided you work with a little vim, vigor,
pluck and push.

We have got something new. It costs
nothing to investigate. Must have a live,
wide-awake representative in your com-
munity, either man or woman at once.
All information cheerfully sent by return
mail. Better write to-day. Address in full,

THE STANDARD SILVERWARE CO.,
ORDER DEPT. 501 BOSTON, MASS.

**HALF A MILLION
PEOPLE**

have written to Dr. A. Owen
in less than two years, seek-
ing information about

**THE OWEN
ELECTRIC BELTS
AND
APPLIANCES.**

THOUSANDS HAVE BEEN CURED
by them when all other means had failed.

OUR ILLUSTRATED CATALOGUE
contains fullest information, list of diseases, cuts
of belts and appliances, prices, sworn testi-
monials and portraits of people who have been
cured, etc. Published in English, German, Swed-
ish and Norwegian languages. This valuable
catalogue or a treatise on rupture cured with
Electric Truss will be sent to any address on
receipt of six cents postage.

The Owen Electric Belt & Appliance Company.
MAIN OFFICE AND ONLY FACTORY,
THE OWEN ELECTRIC BELT BUILDING,
201-211 State Street, corner Adams, CHICAGO, ILL.
New York Office, 826 Broadway.
THE LARGEST ELECTRIC BELT ESTABLISHMENT IN
THE WORLD.
MENTION THIS PAPER.

**MISS BEACH'S
Curling Fluid.**
Keeps the hair in curl for days
innocent as Cologne. A toilet
necessity. Not sent on trial.
30,000 Ladies Have Endorsed It
At druggists, or prepaid, 50c.
LADY AGENTS wanted.
DENISON CHEMICAL CO.,
56 (G) LaSalle St., Chicago, Ill.

FREE.
SUPERB FORM.
LOVELY COMPLEXION,
PERFECT HEALTH.
These are my portraits, and
on account of the fraudulent
air-pumps, "wafers," etc., of-
fered for development, I will tell
any lady FREE what I used to se-
cure these changes. HEALTH
(cure of that "tired" feeling
and all female diseases)
SUPERB FORM. Brilliant
EYES and perfectly Pure
COMPLEXION assured.

Will send sealed letter. Avoid advertising frauds. Name this paper, and
address MRS. ELLA M. DENT, STATION B, San Francisco, Cal.

OPIUM or Morphine Habit Cured at
Home. Trial Free. No Pain.
Comp'd Oxygen Ass'n., Ft. Wayne, Ind.

Fat People You can reduce your weight
10 to 15 lbs. a month at home
without starving or injury by
Dr. Clarke's Home Treatment. Proofs. Testi-
monials Free. F. B. Clarke, M. D. Drawer 153, Chicago, Ill.

FAT FOLKS Reduced 15 lbs. a month. Any one
can make remedy. Safe and sure.
Particulars 2c. P.O. Box 404, C. St. Louis, Mo.

OPIUM Morphine Habit Cured in 10
to 20 days. No pay till cured.
Dr. J. Stephens, Lebanon, O.

RUPTURE Positive Cure. By mail. Send
for circular. Address Capt. W. A.
Collings, Smithville, Jefferson Co. NY

CANCER AND TUMORS scientifically
treated and cured. No knife.
Book Free. Drs. GRANT and NORMAN
163 Elm Street, Cincinnati, Ohio.

VARICOCELE We will send
you the
MARVELOUS
French rem-
edy CATHOS free. It is an absolute and perma-
nent cure. Use it and pay if satisfied. Address
Von Mohl Co., Sole Agents, Cincinnati, O.

PILES Remedy Free. INSTANT RELIEF. Final
cure in 10 days. Never returns; no purge;
no salve; no suppositor. A victim tried
in vain every remedy has discovered a
simple cure, which he will sell free to his fellow suf-
ferers. Address J. H. REEVES, Box 3290, New York City, N.Y.

DEAFNESS & HEAD NOISES CURED
by Peck's Invisible Tubular Ear Cushions. Whispers
heard. Successful when all remedies fail. Sold
only by F. Hiscox, 853 B'way, N.Y. Write for book of proofs FREE

If afflicted with
sore eyes use **Dr. Thompson's Eye-Water**

RUPTURE Positive Cure. By mail. Sealed
Book Free. Address Dr. W. S.
Rice, Box F, Smithville, N.Y.

A SURE and permanent cure for Epilepsy, Fits, in 24
hours. Free to poor. A. A. Ferdinand, St. Louis, Mo.

Your picture is received, and it is magnificent. My little girl went out with it a little while and took 8 orders.

P. G. WILEY, Ohio.
August 6, 1892.

WE OFFER YOU **P**LEASANT
PERMANENT EMPLOYMENT.
PROFITABLE

The picture has arrived, and I have averaged 2 orders per hour. It is the best thing I have ever canvassed for.

F. E. SCHULTZ, N. Y.
August 11, 1892.

The best paying business you can engage in is selling the grand historical picture, "COLUMBUS AT THE ROYAL COURT OF SPAIN." Do you have to "watch the corners" to make both ends meet in your "present business?" Do you want a start in a new business, in which agents are

MAKING MONEY FASTER

Than they ever did before. Success is not confined to experienced agents. Experience is unnecessary. We give you full and explicit directions and teach you how. Scores of persons who never canvassed before are meeting with success that simply astonishes old and experienced agents. Others who failed to succeed with books, novelties, etc., have met with great success with this wonderful picture. Nothing has ever before had the prominence that the World's Fair is giving to the subject of this picture. Its sale is bound to greatly increase as long as this great exhibition is open. Be first in the field and reap a large share of the great harvest.

"WATCH THE CORNERS"

Of this page and see what handsome sums our agents are making for themselves, and they have been doing this right in the hottest season of the year. The harvests have been plentiful, putting more money in circulation; people are returning from their vacations, cooler weather is upon us, and as a consequence many of our agents will double their sales.

\$8.00 a Day. Mr. Wiley's little daughter worked only a small part of one day and took 8 orders, which would make the profits amount to these figures. And only a little girl, too. **\$48.00 a Week.**

\$16.00 a Day. Mr. F. E. Schultz writes us that he has averaged 2 orders per hour. By working only eight hours a day his income would amount to these handsome figures. **\$96.00 a Week.**

\$15.00 a Day. A. H. Kendall, who received his outfit in the afternoon, started out at once and took 7 orders before night. With a systematic canvass his returns will be even better than this. **\$90.00 a Week.**

\$11.00 a Day. Mr. Noble sold right along an average of 11 a day. He has started for one year's work, and is sure of that World's Fair trip. **\$66.00 a Week.**

These testimonials are taken from hundreds of the same kind we are receiving daily.

What Others Can Do, You Can Do.

FARMERS, MECHANICS, CLERKS, TEACHERS, STUDENTS, LADIES, BOYS AND GIRLS, in fact, any one who will put in the same amount of time and energy that every successful merchant is obliged to put into his business, has the door wide open for

A BIG PAYING BUSINESS.

The exhibition of this picture in any locality is sure to bring hundreds of orders, and for this reason we will send to any reliable person applying, who will agree to show it to his friends and neighbors and endeavor to make sales at the regular price, a

Fifteen Dollar Picture And Heavy Gold Frame For Only \$2.50

\$7.00 Clear Profit the First Afternoon.

Received your picture, "Columbus at the Royal Court of Spain," last Saturday afternoon. I was very much pleased with it, and took orders for seven before bedtime, in this small place.

A. H. KENDALL,
Vermont.

July 19, 1892.

EXPRESS CHARGES PREPAID BY US on this sample outfit to any point in Minnesota, Iowa, Missouri, Arkansas and Louisiana, and all states east of them. Persons ordering from any point west of these states may send us only \$1.50, they paying the express charges upon receipt of the picture, which is carried at a special low rate by all the express companies. Give your express station if different from your post-office.

Every purchaser is given Free, one year's subscription to either the Farm and Fireside or Ladies Home Companion.

SIZE OF PICTURE, 20 by 28 INCHES. SIZE OF FRAME, 31 by 40 INCHES—Made of Heavy Gold Molding 6 Inches Wide.

See our full description in July 1st issue, and write at once for our liberal terms to agents. Address

FARM AND FIRESIDE,

PHILADELPHIA, PA., or SPRINGFIELD, OHIO.

A Man Who Means Business.

I have canvassed only 3 days and sold 33 framed pictures. * * * I have bought a horse and wagon and started for one year's work. * * * I am expecting to go to the World's Fair free, and don't you forget it.

ROBERT R. NOBLE,
New Jersey.

July 16, 1892.

Wall Paper.
Samples and book "How to Paper" sent Free. White Blanks 3 1/2c. New Golds - 9c. Embossed Golds 15c.
Painters and Paper Hangers send business card for our large Sample Books by express.
KAYSER & ALLMAN,
410-418 Arch St., Philadelphia, Penna.

\$50 Down Buys a Farm-In Crop!

If you want an 80-acre farm in a good neighborhood; near railroads; good buildings and fences and now in crop, send to-day for my lists. 80, 160, 320-acres at prices from \$2.50 to \$20.00 per acre!

As my terms are ten years time and only

One-Tenth in Cash

any live farmer can make his crops "pay him out." This is better than raw land at any price. Pays an income from the beginning.

OTIS A. TURNER,

Room 5, New England Bldg, Kansas City, Mo.

ENGINES

If you want to buy a strictly first-class outfit at low figures, address **The W. C. LEFFEL CO.** Greenmount Ave. SPRINGFIELD, O.
20 inch BURR STONE Mill \$85.
16 inch Mill \$75.
Catalogue Free. Established 1847.
LEONARD D. HARRISON, Box A., New Haven, Conn.

SAVE HALF ON NEW BICYCLES
A \$25 cycle for \$12; others as low. Largest and oldest dealers in the U.S. We sell every where. Easy payments if desired. Catalogue free. **Rousse & Hazard & Co.,** 32 E. ST. PEORIA, ILL.

MY WIFE SAYS SHE CANNOT SEE HOW YOU DO IT FOR THE MONEY.
\$12 Buys a \$65.00 Improved Oxford Slinger Sewing Machine, perfect working, reliable, finely finished, adapted to light and heavy work, with a complete set of the latest improved attachments FREE. Each machine is guaranteed for 5 years. Buy direct from our factory, and save dealers and agents profit. Send for FREE CATALOGUE. Mention paper. **OXFORD MFG. CO., Dept. 24, CHICAGO, ILL.**

PRICE \$180. We Sell DIRECT TO FAMILIES **Pianos and Organs** \$150 to \$1500.00. Absolutely Perfect! Sent for trial in your own home before you buy. Local Agents must sell inferior instruments or charge double what we ask. Catalogue free. **MARCHAL & SMITH PIANO CO.,** 235 East 21st St., N.Y.
Mention this paper when you write.

TIME IS MONEY
WHICH YOU CAN SAVE BY USING THE **Queen Washing Machine**
One washer sold at wholesale price where we have no agent. For full particulars and catalogue, address **The Buckeye Churn Co.,** P. O. Box 68, Sidney, Ohio.
Mention this paper when you write.

BEFORE YOU BUY A NEW HARNESS
Send a 2c. stamp with your address for 72-page Illustrated Catalogue of 65 different styles of hand-made PURE OAK LEATHER HARNESS. Single Sets, \$7 up; Double Sets, \$16 up. Every harness Warranted and Shipped subject to approval. It costs only a 2-cent stamp to know what we can do for you. TRY IT. King & Co., Wholesale Mfrs., No. 5 Church St., Oswego, N.Y.
Mention Farm and Fireside.

MEND YOUR OWN HARNESS WITH THOMSON'S SLOTTED CLINCH RIVETS.
No tools required. Only a hammer needed to drive and clinch them easily and quickly; leaving the clinch absolutely smooth. Requiring no hole to be made in the leather nor burr for the Rivets. They are STRONG, TOUGH and DURABLE. Millions now in use. All lengths, uniform or assorted, put up in boxes. Ask your dealer for them, or send 40c. in stamps for a box of 100; assorted sizes.
MANUFACTURED BY **JUDSON L. THOMSON MFG. CO.,** Waltham, Mass.
Mention where you saw this advertisement.

IDEAL in Name and In Fact.
IDEAL Steel WIND MILL
and Three Post STEEL TOWER.
The LATEST and BEST.
8.9-12 ft. Genred. Sizes 10 and 12 ft. Ungeared. TOWERS, 30, 40, 50 & 60-ft. Mills with or without graphite bearings.
STOVER MFG. CO., 507 River St., FREEPORT, ILL.
Mention this paper when you write.

Burlington Route
Harvest Excursions
August 30th and Sept. 27th, FROM
Chicago, Peoria and St. Louis
to the Cities and Farm Districts throughout the

WEST Southwest and Northwest
Round trip tickets will be sold by your local ticket agent on these dates at
HALF RATES!
See that they read over the Burlington Route from Chicago, Peoria or St. Louis. It is the direct line to the territory in question. Send for pamphlet with map and complete information to **P. S. EUSTIS, C. P. A.,** CHICAGO, ILL.

THE STANDARD OF THE WORLD
FRANK MILLER'S
FOR HOME AND STABLE USE
HARNESS DRESSING
For Harness, Buggy Tops, Saddles, Fly Nets, Traveling Bags, Military Equipments, Etc.
Gives a beautiful finish which will not peel or crack off, smut or creak by handling. Not a varnish Used by the U. S. Army and is the standard among manufacturers and owners of fine harness in every quarter of the globe.
SOLD BY ALL HARNESS MAKERS.

SAY! BEE-KEEPER!
YOU AS
Send for a free sample copy of ROOT'S handsomely illustrated Semi-Monthly (36-page) **CLEANINGS IN BEE-CULTURE**, (\$1.00 a year) and his 52-page illustrated **BEE-KEEPERS' SUPPLIES** FREE for your name and address on a postal. His A B C of BEE-CULTURE, 400 double-column pages, price \$1.25, is just the book for YOU. Address **ROOT, THE BEE-MAN, Medina, O.**

SEPARATOR and POWERS
for 1, 2, & 3 horses, with governor, either level or regular tread.
Get our prices and Catalogue of Sweep Powers, hand and power Corn Shellers, Feed Cutters, Feed Mills, Steel Land Rollers, Chilled Plows, Mowers, Wood Saws, Engines—3 to 15 Horse Power, mounted or on base plate. **S. S. MESSINGER & SON, TATAMY, PA.**

WARRANTED THE BEST Practical Stump Puller made.
BENNETT'S IMPROVED STUMP PULLER
Sent anywhere in the U. S. On Three Days Trial. On runners. Worked by 2 men. LIFTS 20 to 50 TONS. Five sizes. Price, \$35 to \$70. Circulars free. Man'd by **H. L. BENNETT,** Westerville, O.

ERTEL'S VICTOR
SHIPPED ANYWHERE TO OBTAIN TRIAL AGAINST ALL OTHERS.
HAY PRESS
PURCHASER TO KEEP ONE. DOING MOST AND BEST WORK.
GEO. ERTEL & CO. QUINCY, ILL.

Buckeye Wrought Iron Punched Rail Fence.
Also manufacturers of Iron Cresting, Iron Turbine and Buckeye Wind Engines, Buckeye Force Pumps, Buckeye Globe and Champion Lawn Mowers. Send for Illustrated Catalogue and Prices to **MAST, FOOS & CO. SPRINGFIELD, O.**

WELL DRILLING MACHINERY,
MANUFACTURED BY **WILLIAMS BROTHERS,** ITHACA, N. Y.,
Successors to the Empire Well Auger Co.,
Mounted and on Sills, for deep or shallow wells, with steam or horse power.
Send for Catalogue. ADDRESS **Williams Brothers** ITHACA, N. Y.

Milk PRESERVATIVE.
Milkmen, Creamerymen and Dairy-men can keep Milk and Cream fresh a week without using ice. Healthful, tasteless, odorless and inexpensive. SAMPLE enough to make test, mailed for ten cents. The Preservative Mfg Co., 10 Cedar St., New York.

Kneeland's Crystal Creamery

Only Creamery with Glass Milk Cans and Steel Plate Water Tanks
CREAM WITH OR WITHOUT ICE.
Practicable, Durable, Simple, Perfect, Profitable. Non-rusting, Non-corrosive, no Leaking. Sediment removed by bottom skimming. No dipping or slopping of milk or cream. Glass cans give more and better cream and butter. A perfect "Baby Separator" for small dairies.
Send for catalogues to

Agents wanted. **Crystal Creamery Co.,** Lansing, Mich.
Cut prices to first purchaser.



CHEAPER THAN BARB WIRE.

HUMANE, STRONG, VISIBLE, PERMANENT.
HARTMAN WIRE PANEL FENCE.
Double the Strength of any other fence; will not stretch, sag, or get out of shape. Harmless to stock, a Perfect Farm Fence, yet Handsome enough to Ornament a Lawn. Write for prices, Descriptive Circular and Testimonials, also Catalogue of Hartman Steel Picket Lawn Fence, Tree and Flower Guards, Flexible Wire Mats, etc. **HARTMAN MFG. CO., Better Falls, Pa.**
Eastern Sales Agency, 102 Chambers St., New York; Southern Sales Agency, 51 and 53 S. Forsyth St., Atlanta, Ga. T. D. Ganse, General Western Sales Agent, 506 State Street, Chicago, Ill.

Always mention this paper when you write.

BUCKEYE LOW DOWN HOE Combined GRAIN AND FERTILIZER DRILL

The original and only Glass Fertilizer Distributor. Center Gear, Ratchet Ground Wheels, Positive Force Feed for Grain and Grass Seed and Fertilizer Limber Tongue, with no weight on the Horses' Necks. Frame supported by Wheels both in Front and Rear, practically a Four Wheel Drill. The Ratchet Ground Wheels both being Drivers, the Grain and Fertilizer Feeds are operated in turning either to the Right or Left—the latest and best improvement on Grain Drills now in the market. Also Manufacturers of Buckeye Grain Drills, Buckeye Riding and Walking Cultivators, Buckeye Seeders, Buckeye Cider-Mills and Hay Rakes.
BRANCH HOUSES: Philadelphia, Pa.; Peoria, Ill.; St. Paul, Minn.; Kansas City, Mo.; San Francisco, Cal.
Send for Circular to either of the above firms or to **P. P. MAST & CO. SPRINGFIELD, OHIO.**

Best Fences and Gates for all purposes. Free catalogue giving particulars and prices. Write THE SEDGWICK BROS. CO., RICHMOND, IND.
Mention Farm and Fireside.

KEMP'S DOUBLE CAM HAY PRESS
FULL 2 FEEDS TO EVERY ROUND Spring Folder
CIRCLE
AUTOMATIC FLUNGER DRAW.
GIVEN FREE IF IT WILL NOT do all my circulars AWAY FREE claim. Send for free circulars giving full information. **JAS. KEMP, Kempton, Ills.**

THIS MACHINE \$12
You can give this elegant machine a thorough test before sending us one cent. TRIAL FREE. All attachments free. Every machine warranted 5 years. For catalog, full particulars, etc., cut this ad, out and send to us to-day. **ALVAY MFG. CO., Dept. B 23 Chicago, Ill.**

FREE Stop right here! Read this add!
We will send it to you for nothing.
Do You Know a Good Thing When You See it?
The Finest Catalogue and Handbook of Musical Instruments ever issued. 28 pages, illustrated in colors with Portraits and Photo-Lithographs, giving full particulars of the celebrated Cornish **PIANOS and ORGANS**
You buy a Piano or Organ direct from our factory at cost price, thus saving from 50 to 100 per cent. DON'T buy elsewhere till you see our Catalogue. When you have examined it YOU WON'T BUY ELSEWHERE. BE WISE IN TIME. Don't fill agents' and dealers' pockets with your hard earned money; get every cent of value for yourself, and buy direct from the manufacturer. Send at once for our Catalogue; it is FREE TO ANY ADDRESS. Write us.
CORNISH & CO., (Old Established and Reliable) WASHINGTON, New Jersey.

FREE For 30 Days. Wishing to introduce our CRAYON PORTRAITS and at the same time extend our business and make new customers, we have decided to make this Special Offer: Send us a Cabinet Picture, Photograph, Tintype, Ambrotype or Daguerrotype of yourself or any member of your family, living or dead, and we will make you a CRAYON PORTRAIT FREE OF CHARGE, provided you exhibit it to your friends as a sample of our work, and use your influence in securing us future orders. Place name and address on back of picture and it will be returned in perfect order. We make any change in picture you wish, not interfering with the likeness. Refer to any bank in Chicago. Address all mail to **THE CRESCENT CRAYON CO.** Opposite New Germania Theatre, CHICAGO, ILL. P. S.—We will forfeit \$100 to anyone sending us photo and not receiving crayon picture FREE as per this offer. This offer is bonafide.
When you write, mention this paper.

BUCKEYE CHURN.
Only Principle for Granular Butter.
Large Opening. Easy to Clean.
Varnished in Natural Wood.
No Floats or Paddles.
Awarded First Premium at every State and County Fair and Dairy Association where Exhibited.
Why? Because it makes from 2 to 8 ounces more butter per gallon of cream than any paddle or dash churn. Has no iron journals that work in the cream to make black and greasy streaks in the butter. It will salt, wash and work the butter in the churn—saves using lard and bowl. Requires only one fourth the labor of a crank or dash churn. It has an open vent, allowing the continual escape of gas without stopping to pull a cork.
Premium No. 192 holds 10 gallons; churns 1 to 4 gallons.
Given as a premium for 15 subscribers to either the Farm and Fireside or Ladies Home Companion, at 50 cents each.
Price, including one year's subscription to either paper, \$5.
Premium No. 193 holds 17 gallons; churns 2 to 8 gallons.
Given as a premium for 20 subscribers to either the Farm and Fireside or Ladies Home Companion, at 50 cents each.
Price, including one year's subscription to either paper, \$5.50.
We can furnish churns of greater capacity if desired. Send for prices.
All shipments made by freight, unless otherwise ordered, purchaser to pay charges, which will be light.
Address **FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.**



EASTERN EDITION.

VOL. XV. NO. 24.

PHILADELPHIA, PA., and SPRINGFIELD, OHIO, SEPTEMBER 15, 1892.

TERMS (50 CENTS A YEAR—24 NUMBERS.)

The Circulation of FARM AND FIRESIDE this issue is
250,700 COPIES.
The Average Circulation for the 24 issues of the last 12 months has been
273,145 COPIES EACH ISSUE.
To accommodate advertisers, two editions are printed. The Eastern edition being 125,350 copies, the Western edition being 125,350 copies this issue.
Farm and Fireside has More Actual Subscribers than any Agricultural Journal in the World.

Current Comment.

AFTER hearing a description of the centrifugal cream-separator and an explanation of its merits, a farmer raised the objection against it that the skim-milk from it would be worthless because all the "richness" would be taken out. His argument against the separator because it removed all the cream from the milk melted when his attention was called to the fact that it did not pay to leave twenty-five-cent butter in the skim-milk and feed it to five-cent pork, and to the fact that he was careful not to employ a threshing-machine that left grain in the straw to increase its value for cattle food.

His objection, however ignorant it may seem, is only the reflection of common opinion on the subject; for it is the common opinion that milk, after all the cream has been removed, contains little or nothing of value for food. The contrary is true. The casein, albumen and milk sugar remaining in sweet skim-milk are of far greater value for food than the butter fat that has been removed.

The composition of cow's milk varies considerably, but for illustration, take the following analysis of good, common milk. In one hundred pounds of such milk there are, approximately:

Water.....	87.00 pounds.
Butter fat.....	4.00 "
Casein and albumen.....	4.15 "
Milk sugar.....	4.25 "
Salts (ash).....	.60 "

Pound for pound, the casein and all umen are worth far more than the fat for human food. The fat and sugar are heat formers; the casein and albumen are tissue formers. Protein, represented in the milk by casein and albumen, is the most important and costly element of human food. The protein—or nitrogenous material—in milk is not absolutely wasted, because the skim-milk is usually fed to pigs, but there is an enormous waste by not saving the most valuable elements of milk for human food. It would really be more economical to save the nitrogenous elements of milk for human food and let the pigs have the butter fat. Is there no way to utilize all of it? Part is saved and utilized for human food in the form of cheese.

In an article on nutrition in cheese, Edward Atkinson says:

It will be observed that in dealing with food that can be bought in given quantities at the present time in our markets for twenty-five cents, one gets a certain proportion of protein. According to Prof. Atwater's tables, if one pays twenty-five cents for a pound of sirloin of beef, the protein in that beef costs at the rate of one hundred and six cents per pound. Whereas, if one pays twenty-five cents for skim-milk cheese at the rate of eight cents a pound for three pounds and an eighth, he secures one pound of protein at a cost of thirteen cents. Each man in active work requires substantially one quart of a pound of protein a day, which can be supplied at six cents, disregarding small fractions, by three quarters

of a pound of cheese, if he buys the cheese at eight cents a pound, which for skim-milk cheese is a high price.

It therefore follows that if one likes cheese and knows how to cook skim-milk cheese so as to make it digestible, this necessary food material, protein, can be secured at a very low cost.

To add to the practical value of his article, he quotes from Dr. Williams' "Chemistry of Cookery" the following extracts on cheese:

I have good and sufficient reasons for specifying the properties of this constituent of food (cheese). I regard it as the most important of all that I have to describe in cookery. It contains (as I shall presently show) more nutritious material than any other food that is ordinarily obtainable, and its cookery is singularly neglected, is practically an unknown art, especially in this country. We commonly eat it raw, although in its raw state it is peculiarly indigestible; and in the only cooked form familiarly known among us here—that of a Welsh rabbit or rarebit—it is too often rendered still more indigestible, though this need not be the case.

* * * * *

Taking muscular fiber without bone—that is, selected best part of the meat—beef contains on an average 72½ per cent of water, mutton 73½, veal 74½, pork 69½, fowl 73¾, while Cheshire cheese contains only 30½, and other cheeses about the same. Thus, at starting, we have in every pound of cheese rather more than twice as much solid food as in a pound of the best meat, or comparing with the average of the whole carcass, including bones, tendons, etc., the cheese has an advantage of three to one.

Now comes the practical question: Can we assimilate or convert into our own substance the cheese food as easily as we may the flesh food?

I reply that we certainly cannot if the cheese is eaten raw, but have no doubt that we may if it be suitably cooked. Hence the paramount importance of this part of my subject. A Swiss or Scandinavian mountaineer can and does assimilate raw cheese as a staple article of food, and proves its nutritive value by the result; but feeble bipeds of the plains and towns cannot do the like.

I may here mention that I have recently made some experiments on the dissolving of cheese by adding sufficient alkali (carbonate of potash) to neutralize the acid it contains, in order to convert the casein to its original soluble form as it existed in the milk, and have partially succeeded both with water and milk as solvents; but before reporting these results in detail I will describe some of the practically established methods of cooking cheese that are so curiously unknown or little known in this country.

A fondou is a mixture of cheese and eggs; the cheese is grated and beaten into the egg, as in making omelets, with a small addition of new milk or butter. It is placed in a little pan like a flower-pot saucer, cooked gently, served as it comes off the fire, and eaten from the vessel in which it is cooked. The cheese is in a pasty condition, and partly dissolved in the milk and butter. I have tested the sustaining power of such a meal by doing some very stiff mountain climbing and long fasting after it. It is rather too good—overnutritious for a man doing only sedentary work.

A dilute and delicate modification of this may be made by taking slices of bread, or bread and butter, soaking them in a batter made of eggs and milk, without flour, then placing the slices of soaked bread in a pie-dish, covering each with a thick coating of grated cheese, and thus building up a stratified deposit to fill the dish. The surplus batter may be poured over the top; or, if time is allowed for saturation, the trouble of preliminary soaking may be saved by pouring all the batter thus. This, when gently baked, supplies a delicious and highly nutritious dish. We call it "cheese pudding" at home, but my own experience convinces me that we make a mistake in using it to supplement the joint. It is far too nutritious for this; its savory character tempts one to eat it so freely that it would be far wiser to use it as the Swiss peasant uses his fondou, the substantial dish of a wholesome dinner.

Take a quarter of a pound of grated cheese;

add to it a gill of milk in which is dissolved as much powdered bicarbonate of potash as will stand upon a three-penny piece, and a little mustard and pepper. Heat this carefully until the cheese is completely dissolved. Then beat up three eggs, yolks and whites together, and add to them this solution of cheese, stirring the whole. Now take a shallow metal or earthenware dish or tray that will bear heating; put a little butter on this and heat the butter until it frizzles; then pour the mixture into the tray and bake or fry it until it is nearly solidified.

A cheaper dish may be made by increasing the proportion of cheese; say six to eight ounces to three eggs, or only one egg to a quarter of a pound of cheese, for a hard-working man with a powerful digestion.

The bicarbonate of potash is an original novelty that will possibly alarm some of my non-chemical readers. I advocate its use for two reasons; first, it effects a better solution of the casein by neutralizing the free lactic acid that invariably exists in milk supplied to towns, and any free acid that may remain in the cheese. At a farm-house, where the milk is just drawn from the cow, it is unnecessary for this purpose, as such new milk is itself slightly alkaline.

My second reason is physiological and of greater weight. Salts of potash are necessary constituents of human food; they exist in all kinds of wholesome vegetables and fruits and in the juices of fresh meat, but they are wanting in cheese, having, on account of their great solubility, been left behind in the whey.

The proportion of bicarbonate, which I theoretically estimate as demanded for supplying the deficiency of potash, is at the rate of about a quarter of an ounce to the pound of cheese; and I find it will bear this quantity without the flavor of the potash being detected.

In conclusion Mr. Atkinson says:

There is an enormous waste of skim-milk in this country for lack of knowledge how to deal with it and how to cook it. Skim-milk cheese is hardly marketable, and it ought not to be, because in its raw state it is very unwholesome. I believe the skim-milk is mostly fed to the hogs at the butter factories or by the farmers. There is a great fortune waiting for the man who will invent the right method of making a compound of skim-milk cheese with the exact proportion of bicarbonate of potash required for its solution, if that is a possible thing, and then introducing it as cooking cheese, with the necessary instructions for dealing with it. This waste, as has been stated, is one of the most essential and the most costly elements in nutrition.

THE August report of the statistician of the department of agriculture contains instructive analyses of records of primary prices of farm products by months from June, 1889, to September, 1891, showing the increase and decrease of prices during that period of twenty-eight months. This investigation of prices received at the farm for agricultural products was made in accordance with the request of the senate finance committee. The greatest possible care was taken to secure accurate statistics. These statistics of farm prices are presented at length in tabulated form, accompanied with full explanations. A summary of the investigation is presented in the following extracts from the report:

An examination of the record showing increase or decrease makes an increase in prices of cereals, butter, eggs, mutton and pork, a decrease in cotton, potatoes and flaxseed, and an almost inappreciable reduction in beeves and lambs, in each case a fraction of 1 per cent. The change is thus indicated:

PRODUCTS.	Increase.	Decrease.
	Percent.	Percent.
Corn.....	47.27	
Wheat.....	17.32	
Oats.....	22.09	
Barley.....	28.89	
Potatoes.....		11.56
Beeves.....		.12
Lambs.....		.60
Sheep.....	8.61	
Swine.....	8.68	
Butter.....	24.17	
Eggs.....	31.36	
Cotton.....		24.20
Flaxseed.....		18.37

Consolidating the price of cereals, in accordance with the relative value of each crop, a monthly increase is seen during 1890 and until

May of 1891, with prices nearly as high in the later months in the face of unusually heavy production. In meats the highest monthly value was attained in May of 1891, the average increase for the nine months of that year being 8 per cent in comparison with the summer months of 1889. The average value of all these products of agriculture, taken together, began a perceptible rise in January of 1890, and continued to augment monthly till April, 1891, when the increase was 32.11 per cent, declining slightly during the following summer months, and showing in September an average increase of 18.23 per cent over the initial value in 1889. Taking all the products together by quarters, a steady quarterly increase is noted to and including the second quarter of 1891, when the average increase over the initial value was 30.66 per cent, and for the third quarter, 20.31.

The same report contains some gratifying statistics of our foreign trade in agricultural products, which show conclusively that the calamity prophets who predicted a few months ago that our foreign commerce was about to be annihilated were absolutely and happily mistaken. The following extracts present the figures:

From the preliminary returns of the bureau of statistics of the treasury department, it appears that the foreign trade of the United States during the year ended June 30, 1892, aggregated \$1,857,679,603, exceeding the largest trade in any previous year by more than \$128,000,000. The trade of the year was made up of imports, \$827,401,573, and of exports, \$1,030,278,030. The exports were subdivided into domestic produce, \$1,015,732,011, and foreign exports, \$14,546,019. For the first time in the history of the foreign trade, our exports of domestic produce amounted to more than \$1,000,000,000. The balance of trade in favor of the United States was \$202,876,457, against \$39,564,614 last year, and an adverse balance of \$2,730,277 in 1889, and \$28,002,607 in 1888. In but three years in our history has the balance in our favor been so large. The increase in trade over the figures of the previous year was entirely in our exports, as the imports showed a slight falling off from the record of 1891.

Grouping the items of our domestic exports according to their origin, it appears that farm products furnished 78.1 per cent of the total trade, in value aggregating \$793,717,676. This exceeds by more than \$150,000,000 the value of our shipments of agricultural products in any single previous year, and surpasses the record of 1889 by more than \$260,000,000. It is actually greater by \$63,000,000 than our total exports of all forms of production in 1889, and is greater than our total foreign trade, imports and exports combined, prior to 1870.

* * * * *

The total import trade of 1892 aggregated \$827,401,573. Segregating those articles which may properly be classed as agricultural, it appears that 51.6 per cent of our importation was made up of agricultural products, the aggregate being \$127,933,311. This is an increase of \$18,000,000 over similar imports in 1891 and of \$53,000,000 over 1890. An examination shows the gratifying fact that this increase is almost entirely confined to such products as in no way compete with our own production. Excluding sugar and molasses, which under the present customs law occupy a somewhat peculiar position, it appears that in 1889 51 per cent of our agricultural imports could be properly classified as coming into competition with our own products, while in 1892 a similar division shows but 44 per cent competing. Comparing our imports of such products with our exports, it appears at first glance that the balance of trade in this international exchange of farm products is in favor of the American farmer by \$366,000,000. The balance, however, is not so great. The value of exports is the value at the port from which shipped, and therefore includes the cost of transportation to the seaboard, cost of handling and charges of middlemen. On the contrary, the values of imported articles are calculated as the value at port of shipment, and hence, in order to reach the cost to consumer, it is necessary to add to the values given a proper allowance for carriage and commissions.

FARM AND FIRESIDE.

ISSUED 1st AND 15th OF EACH MONTH BY
MAST, CROWELL & KIRKPATRICKTHIS PAPER HAS BEEN ENTERED AT THE POST-OFFICE
AS SECOND-CLASS MAIL MATTER.We have an office at 927 Chestnut Street, Phil-
adelphia, Pa., also at Springfield, Ohio. Send your
letters to the office nearest to you and addressFARM AND FIRESIDE,
Philadelphia, Pa., or Springfield, Ohio.

TERMS OF SUBSCRIPTION:

One Year, - (24 Numbers), - 50 Cents.
Six Months, - (12 Numbers), - 30 Cents.The above rates include the payment of postage by
us. Subscriptions can commence any time during the
year. Send for Premium List and see premi-
ums offered for obtaining new subscribers.**Payment**, when sent by mail, should be made in
Express or Postal Money Orders, Bank-checks or
Drafts. WHEN NEITHER OF THESE CAN BE PROCURED,
send the money in a registered letter. All post-
masters are required to register letters whenever re-
quested to do so. Do not send checks on banks in
small towns.**Silver**, when sent through the mail, should be care-
fully wrapped in cloth or strong paper, so as not to
wear a hole through the envelope and get lost.
Postage stamps will be received in payment for sub-
scriptions in sums less than one dollar.**The date** on the "yellow label" shows the time to
which each subscriber has paid.**When money is received** the date will be changed,
which will answer for a receipt.**Discontinuances.** Remember that the publishers
must be notified by letter when a subscriber wishes
the paper stopped, and all arrearages must be paid.**When renewing your subscription**, do not fail to
say it is a renewal. If all of our subscribers
will do this, a great deal of trouble will be avoided.
Also, give your name and initials just as now on the
yellow address label; don't change it to some other mem-
ber of the family; if the paper is now coming in your
wife's name, sign her name, just as it is on label, to your
letter of renewal.

The Advertisers in this Paper.

We believe that all the advertisements in this paper
are from reliable firms or business men, and do not in-
tentiously or knowingly insert advertisements from
any but reliable parties; if subscribers find any of
them to be otherwise we should be glad to know it.
Always mention this paper when answering advertise-
ments, as advertisers often have different things ad-
vertised in several papers.

Our Farm.

MISCELLANEOUS MATTERS.

BY T. GREINER.

POULTRY PROBLEMS.—I am not
as enthusiastic about poultry
raising as I once was. The
great profits promised by the
authors of our poultry-books
and by many writers in the
agricultural and poultry press
did not materialize in my case.I cannot say that I lost anything by dabbling
in poultry; on the contrary, I have it in
black and white that in all cases where I
kept strict account I made some profits,
but they were in no proportion to the
tempting pictures with which those writers
had filled my imagination at an earlier
age. Poultry keeping can be made to pay
reasonable profits. No doubt about it. A
good flock of poultry, varying in size
according to the range that can be given, is
an absolutely necessary adjunct to every
farm; more indispensable, indeed, than
any other stock. But when it comes to
making poultry a specialty, and raising
eggs and chickens on an extensive scale,
then, I confess, we are before a problem
that very few people have solved satisfac-
torily, and which the attempt to solve has
cost some people lots of money.I see by the last annual report of the
Rhode Island state experiment station
that considerable attention is there being
given to the investigation of some of these
poultry problems, as is also done at the
New York experiment station at Geneva,
N. Y., and perhaps at other stations. This
is a good departure, and a much better
thing for them to engage in than dabbling
in bee matters, in the investigation of
which the stations cannot hope to compete
with our expert bee-men, who are making
a life study of it. As to poultry, there are
many questions which should be solved,
and which individual poultrymen seem to
be disinclined to settle by systematic tests.
We do not yet know, for instance, how
many eggs an average hen under fairly
good treatment will produce in the course
of a year. We do not know at what age
she is most productive and most profitable.
We do not know which is the best laying
breed of fowls. We do not know a great
many other things about poultry, and I
hope the stations will make careful tests,
settle disputed points, and especially give
us for once the plain truth in regard to the
cost of keeping a hen, and the profits that
can be expected under average circum-
stances.Just at the present time our farms abound
with the choicest of poultry food. Of the
millions of fat grasshoppers which jump
about in the meadows and fields, but a
very small part are utilized in the forma-
tion of juicy poultry meat and eggs. Tons
and tons of raw material go to waste onevery farm. Can we not make use of it?
In some cases, perhaps, it might pay to buy
lean chickens, where they can be
at this time quite cheap, and to turn
them loose in the meadows, providing
them with cheap, movable houses for shel-
ter. Here, without care, feed or attention,
the fowls will grow large and fat in short
order, and may give good returns for the
trouble.Another point worthy of consideration
is this caponizing. There can be no doubt
that there is good money in the business.
The operation is easy and quite safe, and
results in increasing the weight of the
young cockerels and the selling price per
pound quite considerably. The Rhode
Island station announces that a bulletin
treating on caponizing will soon be issued.
Farmers interested in the subject should be
on the lookout for it, and try to obtain a
copy.**THE VALUE OF FERTILIZERS.**—People
who buy commercial fertilizers seldom
have any idea of the real value of what
they buy. Yet with the help of the guar-
anteed analysis found printed on the out-
side of every bag, and perhaps with the
help also of the station bulletins, which
either verify or correct these analyses, it
is easy enough to figure out what a certain
brand of fertilizer ought to cost or is worth.
Available phosphoric acid may be estimated
as worth 8 cents per pound, insoluble
phosphoric acid 3 cents per pound, potash 6
cents and nitrogen (ammonia) 18 cents.
The Michigan experiment station, in bul-
letin No. 86, gives plain directions for fig-
uring out the value of a ton of fertilizer
from the analysis, as follows: As there
are twenty times one hundred pounds in a
ton, if we multiply the value of a pound by
twenty, we get the value of one per cent of
each substance, and thus obtain a factor for
obtaining the value of the material in a ton
from the percentage given in the tables of
the bulletin. One per cent means twenty
pounds in a ton, and if the material is
worth 8 cents a pound, then each per centequals \$1.60 a ton. To find the value of
one ton of a certain fertilizer, multiply \$1.60
by the per cent of available phosphoric
acid; \$0.60 by the per cent of insoluble
phosphoric acid; \$3.60 by the per cent of
ammonia; \$1.20 by the per cent of potash.
The sum of all these items will give the
market value of a ton of such fertilizer.
Take, for example, vegetable bone fertilizer
as found by the station last year:

Ammonia, 5.76 per cent	x\$3.60.....	\$20.74
Available phosph. acid, 5.40 per ct.	x\$1.60....	8.64
Insoluble " " 1.48 per ct.	x\$0.60....	.89
Potash " " 7.80 per ct.	x\$1.20....	9.36

Market value per ton.....\$39.62

In like manner the value of any other
fertilizer may be determined.**PROGRESS IN HORTICULTURE.**—That in-
defatigable writer, Prof. L. H. Bailey, of
the Cornell University experiment station,
is out with his "Annals of Horticulture in
North America for the Year 1891—A Wit-
ness of Passing Events and a Record of
Progress." It is published by the Rural
Publishing Co., of New York City, and
gives a good picture of the present state of
horticulture, and the amount of horticul-
tural products, etc., in the various sections,
of the doings of experiment stations and
horticultural societies. It also gives lists of
the introductions of 1891 in the line of
vegetables, flowers, etc.; also, lists of hor-
ticultural books and of plant portraits pub-
lished during the same year, and illustra-
tions, with brief descriptions, of tools and
conveniences introduced and published in
the same period. The volume is nicely
bound, contains over 400 pages, and should
be in the hands of everybody interested in
horticultural matters.

COST OF MILK.

Allow me to say a few words in reply to
criticisms made upon my article on the
cost of milk, as published in FARM AND
FIRESIDE of July 1st.To commence, I wish to say to all readers
and teachers of the dairy that that article is
gospel truth, and will bear demonstration.I know it exactly as I have stated it, be-
cause I have done it, and others can if they
try. I admire the criticism of J. McLain
Smith in July 30th issue of *Farmer's Home*,
and also A. L. Crosby's in August 15th
issue of FARM AND FIRESIDE, because they
treat the subject with candor, and are not
simply seeking for sensation. Mr. Smith
says I figure cost upon a wrong basis, and
give to the dairy undue credit.The point I desired to make I still believe
cannot be brought home to the general
farmer in any plainer or more comprehen-
sive manner. The cost of milk, if one
attempts to give it from the use of feed-
stuffs in our different markets at selling
prices, would not teach the lesson at all,
because no two would give prices alike on
the cost of feed, and the answers or asser-
tions would be confusing, to say the least.
I gave the cost of feed from actual cost of
labor to produce it, and added to this sum
fair interest upon the land used to grow the
crop. (It was large interest, too, for the
average of farm lands in Ohio.) On the
other crop land of a farm we use for oats,
wheat, potatoes and timothy meadow, if
the same interest is added (five dollars per
acre) it would then bring up the rental of
farms to a very satisfactory price and pro-
voke the investment of capital in land for
the earnings it would make. The pasture
of cattle at twenty-five cents per head cer-
tainly is a very plain and comprehensive
way to ascertain cost. Suppose one at-
tempts to run the dairy business without
the ownership of land, would he for a mo-
ment think of doing it by entering the
retail markets and buying feed-stuff for his
cows? No, sir, not for one moment. Then
why, pray tell me, should that be used as a
basis to figure cost and profit of the dairy?
Instead of this, would he not be compelled
to rent the land, and then figure from my
basis the interest or rental of the land
added to the labor or actual cost of produc-
ing the feed-stuff? Should it not most cer-
tainly make up its cost to him? And the
general farmer does not have to be a veryof production as I gave it. All the ensilage
feed a cow can be made to eat, and all the
dry fodder she can be made to eat, proves
nothing but that each may produce an
abundant flow of milk, and with the grain
feed you mention added, might still be too
expensive for best practical use.Now, the point is, will not an acre grow
a larger amount of the kind of ensilage I
advise than it will of good, suitable field-
corn that must grow the corn to full ma-
turity, and when doing it the corn stalks
must become dry and woody, and at best,
if used in green condition, would never be
over half or two thirds of my kind of an
ensilage crop? Would you not have to
grow nearly twenty acres of common field-
corn to full maturity in order to have suffi-
cient mill feed from it to use with the dry
corn fodder to carry as much stock or fur-
nish as much real food to cattle as I can
grow on my ten acres of the large southern
white corn, and with a great deal less labor
than you can harvest corn, husk it, crib it
and lose one eighth or one tenth of it by
miller's toll, and in addition an extra job
of going to mill every two weeks, because
it will sour and spoil if you get a greater
supply? Can you find in my writing any
shadow of excuse for saying or my think-
ing that a silo has creative food power?
No, sir; but I do claim that the ripening of
the corn crop lessens the worth of the fod-
der very much, and the manipulation of
the grain can never restore it all, and in
place of this it is impossible to make the
land duplicate the ensilage farming I name
by such a course. Does Mr. Crosby think
for a moment that the general farmer can
afford to pay the high prices he names for
mill feed to produce milk for cheese
factories or creameries, when sixty cents
per hundred pounds for June milk and
sixty-five cents per hundred pounds for
May milk is all the factories pay? I can do
this at a profit as I name the method.
When he gets thirty cents for his butter
does he not know it goes beyond the reach
of factory system for either butter or
cheese?I know from the numerous letters I have
already received from all portions of the
country that the article in question hit the
nail squarely upon the head, and men are
not only thinking about it, but will soon go
and do likewise, because they ask me in
great numbers for more explicit informa-
tion about the silo building and the busi-
ness. It is hard for the wise to unlearn
and change fount.I do not desire the idea to be gathered
from this that I am down on experiment
station work. I believe in them, trust in
them, work for them, hope for them, and
all I desire to say is, if the professors now
know it all they would be sorry failures.
Give Prof. Sanborn, of Utah, time to learn
a little practical wisdom and dispel from
his present knowledge the information he
gives that feed to dung-hill steers and
Texas steers will produce as good results as
to our better breeds of thoroughbred beef
cattle. We should all live to learn, and
they have my earnest prayer for advance-
ment.

H. TALCOTT.

ALFALFA CLOVER.

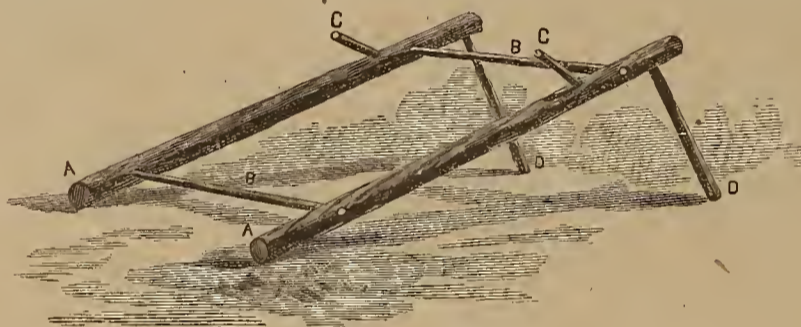
The introduction and cultivation of
clover has always indicated a period of pro-
gress and prosperity to the agricultural in-
dustries of the countries where it has been
tried.Of the numerous varieties of clover that
have found favor with the agricultural
people, and that seem readily to adapt
themselves to peculiar conditions and soils
of the world, none are more historical, in-
teresting and practically useful than the
variety which shall here be called alfalfa,
its Spanish name. It is also known as
purple medick, Chilian clover, California
clover and lucerne, its French name. It is
described in the agricultural report of 1854
as a perennial variety of lucerne, which
succeeds well in our middle and southern
states, and differs from the common lu-
cerne of Europe only in the color of its
flowers, which are purple. Its botanical
name is *Medicago sativa*.It has been known to agriculturists from
the earliest ages of the world. The Romans
introduced it from the land of Media before
the first century of the Christian era.Alfalfa was the Moorish word for this
plant, and when they introduced it into
Spain it was so called by the Spaniards, and
continued to be by the Spanish colonists.
More than two thousand years ago the
Romans cultivated it in Lombardy and
Switzerland. The Moors cultivated it in
Africa before they took possession of Spain.
We do not know how long ago or what
were its effects upon the soil of Asia. We

FIG. 1.—SAWBUCK.

do know that the Spaniards introduced it into Chili, Mexico and California. It cannot be said of any other plant, that wherever it has been introduced it has found favor and given prosperity to carefully conducted agriculture. It has sometimes been unable to stand the freezing and thawing of exceptionally bad winters in some of the more northern regions, but had sufficient pains been taken in affording reasonable protection during the first year, the results might have been different. Besides, a failure or two does not prove anything. I have seen it growing as luxuriantly in Vermont, New York and Missouri as in California, Utah and Colorado. It had the reputation of far surpassing all other forage plants in every instance. I found it at Fort Pickens, in Pensacola bay, Florida, growing out of the whitest sand, which appeared to lack every characteristic of productiveness. It has been supposed to belong to warmer climates and more sandy soils, and thus has been overlooked. The evidences now are that it grows almost any place that it is put, and not only maintains its reputation as a hardy plant, but its ability to exceed the plants long cultivated in those regions. It may have conditions of soil and climate favorable to its best results, but it is doubtful if there is any place where it may not be successful.

At Reno, Nevada, the soil seemed, of all soils I have ever seen, the least adapted to any system of productive agriculture. Sagebrush grew everywhere, and the soil was like a desert otherwise. A forty-acre tract, however, was cleared, and irrigation converted that sandy soil into a most productive field. Alfalfa and water did it. An offer of \$400 an acre was refused. So prodigious was the growth that I was told that a horse with a thirty-foot picket rope could neither eat it out nor tramp it out during the growing season.

AS A HAY CROP.

It is cut as often as it blooms, which is about every thirty days. The climate would vary the number of cuttings in a season. In California, four and sometimes six cuttings are taken; in Vermont, about three cuttings are made. The yield of hay is variously reported, but runs from one and a half to two and a half tons per acre at each cutting. At Denver, Colorado, an old friend said his alfalfa meadow was better than a gold mine, because it was a sure thing, and depending on the price of hay, gave an income of from \$80 to \$100 per acre annually.

The changes effected by the raising of alfalfa upon stock raising in Colorado and all the West where irrigation is possible is marvelous, and promises to be perfectly astounding. Where a sheep once required eight to ten acres for pasturage, now eight to ten sheep can be raised on an acre of alfalfa. Its most astonishing effect, however, is the fact that as green forage or when dried into hay it is a perfect feed for animals; hence, it not only gives the growth and development desired, but when dry is all that is wished for as a fattening food for all animals. With this extraordinary food supply, when irrigation shall be developed sufficiently, the western stockman will fatten his cattle, hogs and sheep and put them on the market at any and all seasons of the year. I mentioned hogs because alfalfa clover is doing as much for hog raising out West as for other animals. This will be some disappointment to the grain raisers in the corn belt who have begun to depend upon feeding western sheep and cattle, and particularly expected to supply winter beef and mutton when grass-fed stock could not be sent forward. Just how extensive this may become depends upon the developments of irrigation in the West, and cannot be known now.

CHARACTERISTICS.

It is perennial, and when once set will last for years without reseeding. It grows taller and is somewhat more woody than other clovers; on this account it is cut before maturity. Though called hay, it is, more properly speaking, dried grass. The leaf is serrated and narrower than red clover. The roots of alfalfa penetrate the soil, however dry and arid, and go to moisture. Cases have been reported by those who have dug wells or seen the margin of crumbling banks, where the roots have been found fifty feet in length. This may readily account for its adaptation to barren, sandy and desert lands, and by the pumping up, as it were, of the fertility found below, enriches the surface of the ground.

It is impossible to estimate the value of such a plant in its usefulness to mankind. Its real value cannot be foreseen, since its

introduction has not become extensive in this country or its qualities appreciated to the extent they will be when better known.

THE SEEDS

Are similar to red clover. Most cultivators sow the seed in the spring, and at the rate of fifteen to twenty pounds to the acre. Unless it is sown thick at the first sowing a good stand can never be obtained, since the growth is so immense that new plants will be smothered out. An alfalfa field will be all alfalfa, for by the cutting once a month weeds are impossible. It is not cut the first year for forage, but it is well to run the mower over it three or four times and leave the weeds and grass lay on the land as a summer, and particularly as a winter mulch. The plants will grow stronger and winter better.

R. M. BELL.

ABOUT SAWBUCKS.

There seems to be great prejudice among farmers and farm-hands against the use of the bucksaw. This, I believe, is mostly the result of poorly contrived benches for supporting the wood, and saws in wretched condition. With the wood properly held and the saw in fine condition, sawing with a bucksaw is an economical way of working up wood, especially if it is in poles of small size.

Oftentimes the chief fatigue of this way of sawing is the strain from holding down the stick with the knee when there is a long, free end overbalancing the part supported on the buck.

To obviate this trouble, a neighbor has a sawbuck arranged like Fig. 2. Instead of having the two x's, it has three, and the whole length, as measured through the center pin, is three and one half feet. A and B are 12 inches apart, B and C are 30 inches apart, and the sawing is done at the end C. When the stick becomes so short that there

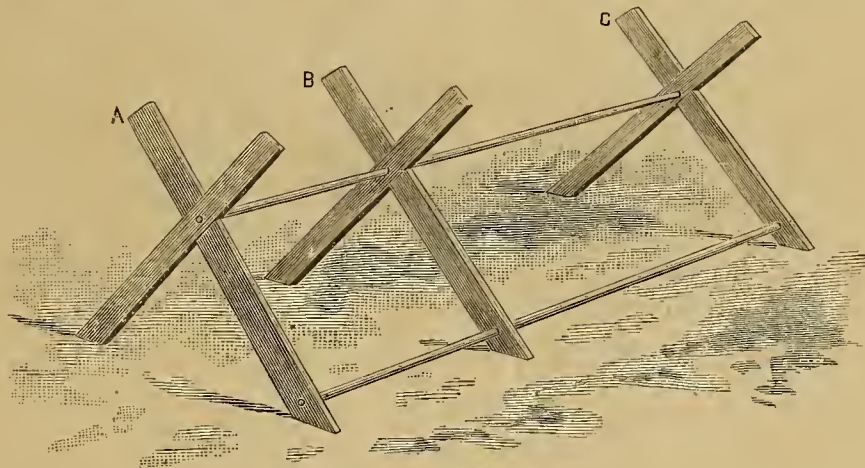


FIG. 2.—SAWBUCK.

are but two lengths of stove-wood remaining, it is sawed on A and B; these being shorter than a single length of wood, support it while it is being sawed beyond B, and at the same time the sawbuck is supported and kept from tipping over endways by the additional cross, thirty inches beyond, which also comes into valuable use in holding long sticks.

Fig. 1 represents a frame for holding large sticks or logs, for sawing with a single or double cross-cut saw. It is made of two poles five or six feet long, connected with cross-pins four feet long. At one end it rests on legs, and two pins easily taken out keep the log in place. These pins are an inch in diameter, and are taken out when the log is rolled into place. With this frame heavy logs can be managed by one man, and easily gotten in shape for sawing in a standing position. On one I have we have sawed logs nine inches in diameter and twenty-four feet long, by having a rude trestle to steady one end.

This spring my sawbuck gave out, and I made one like Fig. 1, with a cross-pin only eighteen inches long. My man likes it much better than the old-fashioned pattern, because it stands perfectly firm and has nothing in the way of working. The long pieces, A A, are five feet long and four inches in diameter, just rough sassafras poles. The cross-pins and legs are inserted into holes bored with a one and three eighths inch auger. The frame where the wood rests is eighteen inches high. The legs and pins are simply driven in. The crosspieces are held in place by ten-penny wire nails, driven from the under side. There is, it will be seen, no iron against which the saw can be carelessly run. I do not fret a great deal if I cannot get all my wood cut in March or April. There are odd days later on, when not much else can be done, and with a good buck and a saw in first-class condition (I keep the saw in order myself), my men do not call sawing wood either hard or disagreeable. If one has a woodpile

close to a shed, a year's supply of wood can be cut in the stormy weather of the spring months, when nothing can be done on the other side.

L. B. PIERCE.

Summit county, Ohio.

THE BULL.

It must be admitted that the bull is a neglected animal—an animal subjected to great ill-usage, if not cruelty. Twenty or thirty years ago, comparatively few farmers kept bulls, but to-day a great many have bulls of their own. The farmer may provide himself with a bull without much expense; he has opportunity to buy a high-grade bull calf or thoroughbred, or raise one of his own from a registered animal.

This is commendable if the farmers will take care of their bulls—give them a chance to live a fairly comfortable life, and not make them eyesores to everyone who visits the place. As soon as the bull begins to show his temper (and he begins to show it very early if treated in the ordinary way), he is discovered to be "cross," a ring thrust through his nose, and he is kept in the stall month after month, year after year, only going out as service requires.

In a great many cases the bull never leaves the stall except when led by the pole attached to the ring in his nose. He is not even allowed the freedom of the yard, because he has shown an ugly disposition. Why should he not show an ugly disposition? He cannot be otherwise than ugly under such treatment as is meted out to him; it would not be natural for him to have a gentle disposition.

Within a week I have seen two bulls, one not yet two years old, that have not been out of the stall, except when led by the pole and ring, for seven months. The bulls are held by the old-style stanchions, so that they cannot reach with their head any part of the body. They cannot rub or lick themselves. Any one with any knowledge of

states, they would be called uncivilized.

With all the vast area of soil that this country affords, it is a pity that different sections for purposes of having and maintaining roads could be understood by a constructed McAdam road in every section would be simply preposterous. It is possible to formulate some system by which the main lines of road connecting the different towns and villages might now be transformed into those of a permanent character where the material is at hand.

Take, however, those sections where stones and the material for the construction of the McAdam road are not to be found, and the case assumes a very different aspect, and is a feature that required more than engineering skill to overcome. Taken as a whole, the question of roads is one of difficult solution and which is affected by conditions peculiar to locality. That it may result in an improvement of the main lines there can be no doubt; but the character of the improvement must be left to those best acquainted with all the conditions and requirements.

A system that is adapted to a level country will not apply to a hilly one of such a formation that the hills must be passed over, and for that reason directions for the work of improvement that are applicable in one place are not so in another.

We throw out these hints and thoughts because much is being written regarding how roads should be improved that is both safe and unsafe to follow; safe where the principles can be economically applied, and unsafe where they are inapplicable.

While upon the subject of roads, there is much that may be done by way of improvement that has no direct connection with the question of travel. The general appearance of a section of country is very much improved where the shade trees are set by the roadside, and the entire surface between the fences kept clean.

And here comes in an idea connected with repairing. Those having the matter in hand have little regard how they leave their work; even if everything is cleaned off, and stones are found in the road, they are cast upon the smooth surface. This, we believe, is wrong. If a land owner takes pride in keeping his front smooth and clean, he should not be discouraged by being burdened by the removal of any material cast out by the roadmaster. We believe there is a tendency to more care in keeping the roadsides clean and neat, and this should be encouraged.

W. H. YEOMANS.

Connecticut.

BLACK BIRCH-OIL.

I have just read in *The Tradesman of Chattanooga, Tenn.*, an article on black birch-oil and its manufacture, of which the following is a part:

"The manufacture of birch-oil is a very simple process. Into a tank three to six feet square, having a copper bottom, over which are coils of steam pipe, a foot or more of water is placed and then the birch brush, after being cut in pieces an inch or an inch and a half in length, is evenly placed. On top of the brush a white woolen blanket, saturated with water, is laid. The function of the wet blanket is to clarify the oil by absorbing from the steam that passes through it all sediments and taints of copper and iron.

"A lid is laid over the tank and made steam-tight by a thick paste made of Graham or rye flour. Steam is turned on and the contents of the tank boiled for six hours. The steam from the tank is conducted to and through a coil, or worm, in a condenser, or 'flakestand,' precisely on the principle used in the old-fashioned distillation of spirits. The oil falls in drops from the lower end of the condenser coil, or worm, into a glass jar, which when full is sealed up to prevent evaporation. Crude birch-oil is dark red in color, but when clarified by means of the white blanket is a very light green. It is very heavy, thirteen fluid ounces weighing a pound, and it sinks in water almost like lead."

Tennessee.

JOHN F. THISSELL.



Mrs. Bigelow.

Swellings

In the neck, or Goitre, caused me terrible suffering, and I spent an enormous amount of money for medicines, in vain. I began to take Hood's Sarsaparilla and in a few weeks I found the swelling very much reduced, and I could Breathe with Perfect Ease,

which I had not done for years. I continued with HOOD'S SARSAPARILLA and am Permanently Cured." MRS. JENNIE BIGELOW, Fremont, Mich.

HOOD'S PILLS cure liver ills, constipation, biliousness, jaundice, sick headache. 25c.

From out of New England and a tier of coast states has developed this great republic, and because the newer states, some of which are in their infancy, have even a system of roads poorer than in the older

Our Farm.

DAIRYING IN EASTERN SCOTLAND.

During the past two or three weeks spent among the farmers of eastern and central Scotland I have had excellent opportunities to observe their methods of dairy husbandry. In the main these methods are not unlike those practiced by the dairy farmers of the United States. The advantages and disadvantages connected with both home and factory dairying appear to be about the same in each country, although I judge the factory or creamery system here in this part of Scotland gives the best results and is the most satisfactory to the farmer.

One of the best managed creameries I have visited is conducted by the Lothian's Dairy Company, and is situated on the Stairford road a few miles from Edinburgh. It is a combined creamery and bakery, for a very large part of the sour milk is used in making various kinds of Scotch cakes and bread. The establishment employs about fifty hands and uses between one and two thousand gallons of milk daily. The milk is received both morning and night, a large portion being shipped by rail, and the remainder brought by cart. The night's milk is kept until early morning, and is then, together with the morning's supply, run through the separators. Of these, two, the Ahtichatagel, manufactured in Stockholm, are used. These separators hold only thirty pounds of milk each, and together have a capacity of separating 300 gallons per hour. Before the milk passes into the separators it is placed in a large vat, where it is warmed to a temperature of 84° Fahr. This is regarded as necessary in order to effect perfect separation. The cream coming from the separator passes into cans, where it is cooled by spring water to 58°. It is then churned by the ordinary revolving churn, without dash or paddles. The churn is stopped when the butter is in the granular stage and the butter is washed with clear cold water. It is next covered with a very weak brine and allowed to stand for a little time. It is then removed and placed upon the butter-workers, where it is kept only a few minutes. Then it is divided into quarter, half and pound packages—the greater portion into the smallest size, and is delivered to customers the day it is churned. Each package is wrapped in a good quality of paper and contains the name and brand of the company. The price received is thirty-six cents a pound.

The skim-milk which comes from the separator is treated as follows: About one half of the daily quantity is collected into vats and kept at a favorable temperature for rapid southing. This is used by the company in their bakery. The other portion, that is, whatever they cannot use, is heated to 150° as soon as it leaves the separator and is then quickly cooled, and kept in a cool place until sold. It is disposed of to bakeries, private houses, etc., and finds a ready sale.

It was a surprise to me to learn the quantity of sour milk used in the different products of the bakery. In most of the forms of oatmeal or wheaten bread and cakes made, for every ten pounds of flour six pounds of sour milk was used, and in other forms, especially cakes made of American wheat flour, six pounds of milk were used for every eight pounds of flour. The gain in weight in the loaves and cakes made with milk was enough to pay a fair profit on the milk; that is, a given weight of flour, if mixed with water, would make a loaf weighing nine ounces when baked. The same weight of flour, when mixed with the sour milk, would make a loaf weighing ten ounces, and this difference paid for the milk, not counting the profit on the bread.

Everything about this establishment was scrupulously clean and neat. The cans in which the milk is shipped or brought to the factory are all provided by the company and cleaned by them. In this the very perfection of cleanliness is attained. The cans are thoroughly scalded in hot water, then steamed, and then vigorously rubbed, both inside and out. Looking into several that had just been subjected to this treatment, upon raising the carefully-fitting cover, one might well fancy he was gazing into a mirror. The price paid the farmers for their milk at the factory averages sixteen cents per gallon. Mr. Smith told me that in seasons of great scarcity they had often paid twenty cents a gallon, while in times of great abundance the price had fallen to twelve cents. It had never been below this.

This company, as well as the proprietors

of other factories visited, have a duly signed contract with each patron. This contract specifies on the part of the patron that he shall supply pure milk containing not less than three per cent of fat and nine per cent of solids, not including the fat; it shall be delivered twice daily and dispatched with all speed as soon as milked from the cows. The patron also agrees to pay the sum of seven cents a month for each can as hire for the use of the same, and to deliver them up on the expiration of the contract in good order. It is further agreed that the company shall have power to refuse the milk if it shall contain any offensive flavor from the feeding of turnips or any other food. The patron also agrees to conform to certain sanitary instructions which are printed as part of the contract. Some of the more important points in these instructions or regulations are as follows:

The cows must be perfectly healthy, sufficiently fed and comfortably housed. They must be turned out for exercise every day in winter when the weather permits. The cow-sheds must be well lighted and ventilated, and an average space of 750 cubic feet allowed to each animal. The manure must be removed twice daily. The cow-shed must not be used to house or feed any other animals or for poultry. The ceiling and walls must be washed with quick-lime every two months, and the wood or stone work of the stalls once a month. Each cow's udder must invariably be washed before milking. The milker's hands and arms must be washed every time, without fail, before they are allowed to touch the cows' bags, the milkers, dairymaid, or any one handling or coming near the milk or cans must be scrupulously clean in their persons, and perfectly free from skin or any other disease. No person suffering or recently recovered from infectious disease, or living in the house where infectious disease is prevalent, or who has been in contact with any persons suffering from infectious disease, shall be allowed to come near the cows or assist in any of the operations connected with the cans or milk.

There are other regulations and more particulars connected with some of these cited above, but enough has been given to show the scope of the contract. I was assured that the patrons, as a rule, obeyed the regulations to the letter, and fully recognized the fact that their own interests demanded the observance of all the sanitary instructions given. The company employs a sanitary officer who is at liberty at any time to inspect the dairy, cows, sheds, etc., and also to examine the servants as to the observance of the contract.

The cows are mostly of the Ayrshire type, although there are a few herds of what are termed the Aberdeen-Augus, a few Guernseys, and some other somewhat mixed and doubtful breeds. The annual milk product from each cow varies from 650 to 900 gallons. Comparatively, dairying in the most favored sections of Scotland is quite as profitable as it is in the United States.

WM. R. LAZENBY.

THE UNCLEAN PIG.

It appears to be taken for granted that the pig is an unclean animal and enjoys life best when wallowing in filth. But the fact that the pig is found often, if not usually, in filthy pens is no proof that it is good for the pig, or that the pig enjoys it.

Every animal (there is no exception) in a natural state has cleanly instincts and keeps clean. The sparrow bathes in water and dusts itself, and cows "lick" themselves and each other. In a wild state the pig does not make his bed in a slough of mud, but in a dry and clean place. The fact that an animal eats filth, even carrion, is no proof that the animal is uncleanly in its habits. The carrion lizzard plumes itself and dresses as carefully as the canary.

It must be admitted that the pig has been prostituted or driven to base uses. Owing to the pig's habits, a necessary result of the conditions to which he has been subjected, he has been delegated to work over compost collections. Therefore, in the most filthy places imaginable, he has been thrust for the purpose of making himself into pork and working over manure.

Farmers who take an interest in the welfare of the pig and provide clean quarters, have no idea to what some pigs are subjected. They are in dark holes under stables where the light of day never enters except what can creep in when the scuttle is opened, where there is not a dry spot, only reeking, miring filth. The pigs in such places have nothing to drink except the accumulations around them. Corn is thrown them through the scuttle, and that

is all they get. Think of such pork as this for human consumption!

If this be not cruelty to animals, what is? If such cases are beyond the reach of societies for the prevention of cruelty to animals, then they ought to be reorganized. It is a good thing to have horse flesh protected, but there are other animals suffering "great cruelties."

The pig is a rooting animal; he was built for the purpose, with a spade and plow-share snout to get his living primarily by digging for it—for roots and grubs. His delight is to run his snout eyes deep in the sweet, clean earth. There is nothing to show that he roots from choice in a manure pile. But root he must, for 'tis his nature to, and if he be confined to a compost heap, he must dig in it, especially if his food be thrown upon it, as is often the case; aye, and for the express purpose of making him dig for it.

In some pens are found pigs comparatively clean—as clean as they can be, perhaps, and be confined at all. They are given employment. Next to rooting in the earth, the pig delights to work over sods fresh from the fields full of grass roots and perhaps grubs. The clean earth neutralizes some of the necessary filth and absorbs it, giving the farmer the best fertilizing material he has.

Such pigs, fed upon clean food, corn and corn mush, table scraps and plenty of drink (he likes water—plain water, it is believed, quite as well as dish-water), such a pig will be more respectable in appearance, and will have a different character than one fed and treated otherwise, and when ready for the butcher will be pork without a taint and without a suspicion.

GEORGE APPLETON.

CO-OPERATIVE CREAMERIES.

For the general farmer who is fully occupied with other farm cares and work, co-operative dairying is a great advantage to him. In my former articles I mentioned some of the advantages to the farm resulting from the dairy. A few of the most important items I wish now to "rub in." The farm needs the dairy; it must have it or you die indebted to the world, because you certainly deplete the fertility of mother earth, when in place of this it is your highest duty to make it grow better and more productive. Cattle in abundance are needed upon the farm to manufacture the rough, coarse feed of grain-growing farms into manure. The silo and ensilage system I have already told you about will greatly increase the capacity of the farm. The additional manure pile makes more and better acres of grain growing possible, and it may seem strange and startling to some to know that cultivated fields on a few farms of Ohio that have adopted silos, have received so much extra barn-yard manure that the supply or coating of it had to be lessened per acre. The straw of fine grain grew too rank, and more acres were added to small grain crops. Even such a forced necessity has been reached that spreading manure on pasture lands has actually had to be done in order to utilize the possibilities of ensilage farming. The farmer who ignorantly and *mulishly* cries out against ensilage and tries to console himself for this loss by so doing instead of demonstrating this plain farm problem and know for certain the truth of what he is talking, in these days of advancement is neither kind to himself nor family.

There is no excuse for such a continued blunder. Labor upon the farm and in the farmer's household is constantly needed; no necessity whatever to look for it—a job is waiting for every member of a farmer's home, and extra ones at hand to furnish needed exercise to visitors when they come.

Co-operative dairy work, therefore, rids the farmer's wife and home of much drudgery, and they last longer and are better companions for it and don't require to be replaced so often. The sending of milk every day or twice a day from the farm to the creamery or cheese factory, if done by well-established milk routes and teamsters, does not interfere greatly with the regular farm work of either man or woman.

Women especially are greatly relieved, because washing of the milk-cans and keeping sweet and clean all the needed milk utensils of a farm can be done by the hired girl, or by a big boy in a pinch, if you put an apron on him and are prudent enough to teach him how to use a dish-cloth and scalding water.

Upon our western reserve in these dairy counties of Ohio, where cheese and cheese factories are almost *legal tender*, the little milk-can stand is by the roadside of every farm-house, and generally a little roof shed is over them, or else they are under a

good shade tree. It is a very common sight to see a very short dairymaid trying to wash the inside bottom of a tall milk-can out on these milk stands. Now, boys on the farm, learn how to do this chore yourselves, and relieve those nice, little gaiter boots from such awkward exhibition.

The creameries and factories will provide their patrons with the necessary rules and regulations for the care and handling of milk, and it is one of the most important items of the whole business that every farm adopt them and practice them most thoroughly.

I have had tons of cheese spoiled in factories where careless farmers had neglected to take proper care of the milk. Every patron of the factory was hurt by it, and the reputation of the factory itself greatly injured. So deep has this trouble been upon some occasions that it almost baffled our skill to detect who the offenders were. We have been compelled to take each milk-can and run the curd off by itself in order to locate the mischief, and then our smelling committee had to visit the farm and learn the cause. It would generally be filthy water or access to some impure food; not often to extreme untidiness or neglect in care of milk-cans or other utensils used.

Upon several occasions it was the filthy practice of milkers in sending fertilizer from the farm to the factory, and in all such cases, I recommended the milkers should be made to drink frequently of the milk they put in the can as this work is in progress. Of course, we have laws that will punish this sort of crime and make it odious, but it is far better never to have such disaster occur.

Permitting carrion of any kind to pollute the water that cows drink in pasture is not admissible. I have seen milk in one extreme case where a whole vatful was spoiled by the injured milk from only one farm, and it could not be made into cheese at all. Investigation proved it to be foul water drunk by the cows from a little creek running in the pasture that received the drainage of the farm barn-yard, where *deacons* (not of the church), but young calves as soon as born almost, or as soon as their *remnants* were fit to save, were killed, skinned and thrown out upon the manure pile to add to that.

I simply mention this to impress more deeply upon the minds of all new beginners the absolute necessity of cleanliness in all dairy work, especially so in co-operative work. This addition of a herd of cattle to grain-growing farms, of course, need not all be dairy cows. If the farm help is deficient in milkers, or too busy to attend to much of it, some of the herd may well be young cattle or beef cattle for stock purposes. But have the herd of cattle at all hazards, and let every farm on these milk routes co-operate to its fullest advantage, and you then make it possible to prosecute this work in most every farm neighborhood, and the haul of milk need not be so great or expensive as to forbid the business of a creamery or cheese factory.

H. TALCOTT.

SOWING RYE FOR PASTURE.

Permit me to call attention to the value of sowing rye in the corn in the fall, for pasture the following spring. It should be sown in fields that are to be planted to corn again the following spring, and such fields may be left for the last planting—as late as the 15th or 20th of May.

Much of the corn is late this season, and the rye can be sown the last time the corn is plowed, and it will cost nothing but the seed, which should not be less than one bushel per acre. The rye will not grow much until the corn is cut; but if the fall is favorable it will get a good growth in the fall, and will make good early pasture for spring, and when the corn is not cut, it will make good pasture, with the stalks, during the winter.

The rye comes in the nick of time, early in the spring, between ice and grass, and enables the farmer to keep his stock from his pasture-field till his clover gets in bloom, when it is worth much more than when pastured sooner.

When such fields are plowed up and the rye well turned under, it leaves the ground in very good shape for another corn crop. I have practiced this for years, and have never had anything pay me so well.

If the rye cannot be sown the last time the corn is plowed, it pays well to sow it in September. The sowing may be done on horseback, as it is slow work to sow in the corn on foot. If you sow on horseback, you want to cover your horse's ears, to keep the rye from falling into them.

The next best paying thing is to drill oats

among the wheat in March or April, when the wheat is very thin on the ground. You will have oats instead of weeds. Thousands of bushels of oats might have been raised this season where weeds now grow. There will be some wheat among the oats, as it is not nearly all destroyed if you drill the oats the same way the wheat was drilled in the fall. When wheat is so very thin, what little there is cannot be gathered on account of weeds, which usually grow when the wheat is too thin.

Ohio. JOHN MARSHALL.

CO-OPERATIVE CREAMERIES.

EDITOR FARM AND FIRESIDE:—We see you are interested in co-operative creameries, and as we are acquainted with some we can give you a few facts. There are many in eastern Vermont, and they are a success. Farmers get more for their butter, after paying for drawing, making and marketing, and they now keep more cows. More than three times the number of cows are now kept than ten years ago. Silos are increasing, as one trouble in Vermont is in pasturing.

Here are reports of two creameries within three miles of each other, with another about four miles away, a second five miles away and two others ten miles away.

Lyme, New Hampshire, creamery in June received 311,577 pounds of milk, which made 14,800 pounds of butter. After deducting freight and commission, \$3,073 was received for butter. The running expenses, including reserve for interest on stock, amounted to \$335. The net price paid to patrons during June was 18½ cents per pound.

This creamery cost \$2,500. The stock owned by farmers. The association has a president, secretary, treasurer, and pays two men to run the creamery. Centrifugal separators are used, and the milk is credited to patrons by the oil test.

The North Thetford creamery during June received 262,026 pounds of milk. The average, by the Babcock test, is 5.09 per cent (which means 5.09 pounds of butter to 100 pounds of milk.) Butter made, 12,827 pounds; received for butter, \$2,593.50. The cost of making and marketing the butter was 2¼ cents per pound. The patrons receive 17 cents per pound net.

This creamery cost \$2,500, and is owned in shares of \$100 each. Each patron sees to carrying his own milk, and pays from \$1.50 to \$3 per ton, according to distance. Some milk is carried several miles in large cans made especially for the purpose, and the driver makes good pay, as in many cases he can get home in a half day. Each creamery mentioned runs two separators.

Here is a report of a Holstein-Jersey cow for the month of June on grass, after taking out milk for family use: She gave 1,153 pounds of milk, testing 5.12 per cent. Her 58 pounds of butter, at 17 cents per pound, amounts to \$9.86.

There are many abandoned farms in Vermont which only need men and women of energy to make them return a good living. They are not all worn out.

We formerly sold good butter in summer for 10 and 12 cents per pound, and waited six months for the pay; but now the creamery pays us once a month. Farmers ought to learn that co-operative business would help them.

S. A. P.

East Thetford, Vt.

PERMANENT PASTURES.

At this season of the year, when pastures are usually most severely tried, one is in a position to appreciate a permanent pasture well set in a variety of good grasses of luxuriant growth, some of which are certain to be in prime condition for the production of butter fats.

Notwithstanding the abundant rains of the past season have made the pastures look fresh and inviting, being covered with a rank growth, yet the quality of nourishment afforded has not been of the best for dairy purposes. Where the cows are compelled to diet on one variety of grass from May to December, without supplemental rations of bran, meal or green corn, they can scarcely do so well as when feeding on a variety of grasses, each in season, each in proper stage of growth to abound in nutritious elements.

We have eighteen acres set aside as permanent pasture, and though now twelve years old, it appears to be getting better each season. The field is high and rolling, and somewhat inclined to wash, and for this reason and because it was well watered by two good springs, was set aside as more profitable in pasture than in grain. It is well set in timothy, red and white clover, blue-grass, red-top and orchard-grass, and

though pasturing fifteen to twenty head of stock, would have made several tons of good hay. This surplus growth, however, is permitted to fall and provide a mulch for the protection of the tender plants during the winter and early spring as well as during protracted dry weather in mid-summer. When any portion appears to have suffered from close pasturage or severe drouth, it is given a top-dressing of stable manure, and is thus soon restored to normal condition.

It is frequently argued, and not without foundation, that stock do better with a change of pasture, but there are disadvantages which must be considered. More fences must be maintained, or breachy stock will be the result, and for one we have no use for a jumping animal of any description. Then the tramping of the animals over fields intended for cultivation is quite injurious to the soil, and will do more harm than can be remedied by several crops of clover or many tons of commercial fertilizers. Besides this, if one stables his stock a portion of the day, they return to the pasture as readily and partake of the herbage as greedily as if turned upon pasturage with none of the above-mentioned drawbacks.

To provide against emergency, and as an agreeable change for this season, a small plot of corn is planted conveniently near the stables, and this fed green during August and September, and is greatly relished by the cows.

One thing to be considered when locating a permanent pasture is an abundant supply of pure, fresh water. Since milk is so largely composed of water, it stands to reason that a pure article cannot be manufactured, even in the laboratory of a cow's stomach, if the water is stagnant or impure. In this respect, good spring-water is far superior to brooks or ponds.

Another consideration is the disposal of all noxious weeds. These are of no possible benefit to the pasture, and besides frequently tainting milk and butter, are constantly encroaching upon the grasses and tend to smother them out. It is the rule here to go over the pasture from one to three times each summer, and with hoe and scythe cut out these intruders.

JOHN L. SHAWVER.

Shady Nook Farm.

OUR ROADS.

ROAD-MAKING MACHINERY AT THE WORLD'S FAIR.

"Why can we not have better roads?" is a question which has, probably, been continually in the minds of a majority of the rural citizens of our land.

This question is somewhat difficult to answer, yet I shall say that most of our roads

LACK PROPER DRAINAGE.

the foundations of others are of weak formation and soon sink beneath heavy loads; our roads are not worked enough. If a greater number of

ROAD-MACHINES

and scrapers were used we should have better highways. In most localities there is not, perhaps, a single road-machine where there should be half a dozen. In the days of electricity and steam, road making should be easy, and we should have far better roads than we have.

Do you recognize the effects bad roads have upon the farmers of our land? Perhaps not. Statistics show that at least 2,000,000 extra horses have to be kept on the farms because of the poor roads. It costs at least twenty-five cents a day to keep these horses. Multiply, and you find it costs

\$500,000 A DAY

to keep these horses.

The farmers, where there are no railroads or other mode of transportation, must haul their farm products over rough roads, and that is a serious drawback to farming. Would our farmers not raise more grain, vegetables, etc., if they could easily place them on the market?

THE WEAR AND TEAR

on the wagons and harness is expensive. Horses become diseased from the strain in pulling and unevenness of the roads, while the driver is almost jolted to pieces. This may be one cause why young men leave the farm and seek employment in the city.

Poor roads are a

BIG EXPENSE.

and the countries of the Old World have found it so. France has 130,000 miles and Italy 20,000 miles of probably the best roads in the world. Can we not afford good roads as well as European countries?

On October 12, 1892, opens at Chicago the greatest

"FAIR"

the world has ever known. There will be displayed articles and wares of all nations. Large buildings are being erected for the different displays, each building containing a certain group of exhibits, but as yet there is no building erected for the special display of road-making machinery and materials, which is sadly needed. Roads should be made on ground adjacent to the exposition ground, by the improved machinery and methods of this and other countries. Of course, the machinery and material will be exhibited, but in so many different classes as to attract no special attention, and found with difficulty.

We believe the

ROAD QUESTION

to be of considerable importance, and should be carefully studied by every American citizen who wishes better roads and "times."

Let us all hope there will be a building for the exclusive display of road-making machinery and material at the great fair, as we surely need encouragement in the construction of better highways, which are for the people, of the people and by the people.

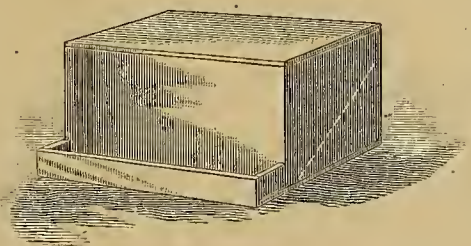
C. H. R.

Middlebourne.

SELF-FEEDING BOX FOR POULTRY.

Mrs. S. A. P., of Virginia, wishes me to give plan of self-feeding box for feeding grain to poultry.

Make a box of any convenient size, say 20x14x10 inches, and nail a piece of board inside, slanting to the front of box, as shown in cut. Let bottom of box project in front three inches, and front of box come to within one inch of bottom. Now nail a strip two inches wide around projecting part of bottom to keep grain from wasting.



SELF-FEEDING BOX FOR POULTRY.

This is the simplest form of self-feeder, and can be made out of a soap-box or any box of right size. The top of box is of course left unfastened to put the grain in.

I wish to say that in using a self-feeder it should always be kept supplied with grain, then the hens will not overeat, as they would if the box were allowed to remain empty occasionally. In winter keep the box filled with corn and feed the hens with wheat, oats or other feed once a day. In summer fill the box with oats and feed once a day with wheat, corn, etc. I have fed with nothing but corn for months at a time, but think it pays to give a change.

A. L. CROSBY.

SURPRISING.

The prices of lambs cause wonder that farmers should not engage in the business more than they do. With some sheep raisers there is too much sentiment to sell a lamb at from eight to twelve weeks old, although it will bring as much money as a three-year-old wether. There is a feeling that it is a sin to sell before it gets its full growth. Why should there be any foolishness in this when they raise sheep for money? Quick money is the motto of lamb raising and every other live stock industry. Small profits and quick sales is a motto with all business men. Just now the profits in the right kind of sheep, in the right kind of fix at the right time, are not so small as they used to be, but they need careful looking after. If the American farmers do not look to their interests and the demands of the mutton, it will not be surprising if a flood of frozen mutton should be poured into our markets from South America or Australia. The prices indicate the possibility more strongly every day of competition in mutton as well as wool. The question of how long the western ranges can keep up the supply of grass mutton and feeders for the corn states to furnish winter mutton for the eastern markets, has been growing upon us for two or three years. Now that the feeding states (Nebraska, Kansas, Missouri and Illinois) are buying up feeders for a second time this year, the surprising fact brings up the question with more force than ever.

R. M. BELL.

DRAFT HORSES FOR FARMERS.

No farmer from his own choice breeds the "scrub" as now defined, but many lack confidence in themselves to make the start in stock improvement or breeding. It requires some business tact in a farmer of limited means to patronize the best draft sires; but, barring accidents, he cannot fail of success from the start, for draft horses are as salable usually as fat stock. And with tact, the skill to handle and dispose of driving teams, and the peculiar fitness for training, one may achieve more than ordinary benefit in breeding coach horses. More capital, however, is required; but if able to make a specialty of buying and mating fancy carriage teams for city use, one can do better in this line of breeding. Yet, remember that in this case half and often three fourths of the selling price is for exercised skill, from start to finish, in preparing the team for market. To do this requires months of careful handling backed by years of judicious treatment, thus making the perfect family horse almost human in his acquaintance with mankind and the affairs and ways of the world. Unto many wealthy men a family horse is worth at least one fourth "his weight in silver." Certain profit always follows the right start in breeding the service of a choice sire upon as good dams as one can afford. The majority of farmers will find surer gain in growing draft horses, as this requires less special knowledge and fitness for the work.—*California Breeder.*

TESTING MILK AT THE CREAMERY.

All milk sent to the creamery should be tested for quality, no matter whether the creamery be conducted on the co-operative plan or not. It is the only fair way to do business, and it is to the interest of every honest patron of a creamery to have all milk tested and paid for according to the per cent of butter fat it contains. If the milk is not tested, then it follows, as a matter of course, that those who take rich milk to the creamery are compelled to divide profits with those who take poor milk, and this is putting a premium upon making poor milk, for poor milk costs less than good, but if it will bring the same price it will pay better to produce it. The Babcock test will give results accurate enough for all practical purposes, and at very little cost of time and money; in fact, as now used in some creameries, a great saving of time may be made by making composite tests; that is, taking a sample of each patron's milk each day and setting the whole number of samples once or twice a week. Everyone who takes milk to a creamery should insist on its being tested and paid for according to its butter value; then he will have an incentive to keep the best cows and feed them with a view to the production of the richest milk in the largest quantity. With this object kept in mind there will be the better chance to make money.—*National Stockman and Farmer.*

HOG-CATCHER.

To catch a hog and hold him without striking or laying hands on him, prepare a strong, small cord with a slip-noose at one end; lay the noose on the ground, a little extended, and place within the circle some corn. When the hog comes to eat the corn the noose can be drawn snug back of the tusk by the first intention.

I caught a pig in that way once, which weighed one hundred and thirty pounds, dressed, which I wished to butcher alone. I tied the cord to the top of a post at the side of the pen, and as he settled back on his haunches, cut his throat, and did not touch him with a finger till after he was dead.

I think this method would be preferable for a large hog, rather than chase him around to throw him and listen to his outcry.

E. P. BYRAM.

New York.

LAND MEASURE.

I have read in the FARM AND FIRESIDE a description of an implement for measuring land that is very convenient. I have one similar that I like. The legs of mine are made of flat pieces and fastened together with a small bolt. The crosspiece is a flat piece of wood fastened to the legs with wood screws, and by taking out one of the screws it will fold up when not in use. The points are just half a rod (8 feet 3 inches) apart. I have a small one made in the same way, with three holes in the crosspiece, to make it sixteen, twenty and twenty-four inches wide, to use for setting plants in the garden.

Illinois.

ALLEN AUSTIN.

Our Farm.

SUNDRY SUGGESTIONS FOR THE HOME GARDENER.

BY JOSEPH.

KILL THE BUGS.—As a further illustration of the necessity of concerted action on the part of soil tillers in their fight against insects, let me call attention to the hundreds and thousands, and perhaps hundreds of thousands, of bad-smelling squash-bugs—some large and small, some black and some still light colored, according to age—which are just at this time infesting, in families and colonies, the squash hills in the average garden. If you go anywhere near the vines you cannot fail to see these disgusting insects; and when you do see them, perhaps you think, "What am I going to do about it? What *can* I do about it?" You see no way how you can destroy them easily, and go about your business, leaving the hordes of bugs unmolested and ready to breed trouble for another season. I do not wonder that this pest has multiplied so terribly in recent years, and gives us so much trouble now. Well, what can we do about it?

I will tell you what I have done about it. In the first place, I have planted no winter squash at all in my home garden; only a few vines of some new summer variety. I did not think much of this new summer variety, anyway, and when I found the plants covered with bugs, both the large, odorous black fellow and the small, yellow-striped beetle, I made up my mind to destroy them, plants and all. So I poured a quart or two of kerosene all over the plants and bugs, threw some dry rubbish over them, and set fire to the latter. Now there is neither bug nor plant left. I found, however, that the mere contact with kerosene would kill the bugs. Perhaps we can make an emulsion that will have this effect without destroying the plants. Now, it strikes me that it would be a good thing to plant some hills of squashes in every garden just simply for bait, and when the bugs have congregated on them to destroy them by spraying with kerosene or a kerosene emulsion, or by other means. The bugs should die. We have given them the freedom of our gardens long enough; and they have abused their privileges shamefully. But it will not be of much account if a single gardener kills them on his place, while all his neighbors around him keep on breeding them by the thousands. Here is a case where co-operation is absolutely needed.

SAVING TOMATO SEEDS.—It is not long since it was orthodox doctrine that tomato seeds should be saved from the first nice specimens, for the purpose of maintaining or improving the earliness of the variety. At present we do not believe in any such thing. We have now varieties that ripen their fruit so early that there is no need of making frantic efforts in the direction of further gain on earliness. I can have Early Ruby and Vaughan's Earliest, etc., on my table by the middle of July. I think that is early enough, and the efforts that propagators should make must be in the direction of improving shape, size and quality and perhaps vigor of plant. In some of these points these earliest sorts leave much to be desired. The Ruby especially, although reasonably smooth, quite good and of fair size, is almost too diminutive in plant, and consequently not productive enough. As is usually the case, while gaining in one direction we have lost in another. Prof. Goff has shown by a series of systematic experiments that earliness in tomatoes can be gained quite readily and rapidly by the persistent selection, year after year, of still green specimens for seed. But the plants lost in vigor at about the same rate that they gained in earliness. In order to maintain the good points of any one variety it is only necessary to select the smoothest, finest, most solid specimens for seed, no matter whether these specimens are the first or last that ripen.

Still there comes another consideration. Where different sorts are grown together they are quite liable to mix. This is not a serious matter for the home grower, so long as all the plants in the patch bear large, fine, smooth fruit. When he has some scrub stock among them—some small, knotty, wrinkled, hollow things—or some of the fancy kinds, like Peach, or Fig, or Plnm, or Currant tomato, the plants grown from seed taken from the largest, smoothest tomato in the patch, and may this be a Ponderosa weighing two pounds, may produce a very undesirable lot of fruit. We

have to use considerable discretion in these matters. To be sure of propagating a certain variety, it is necessary to raise it from seed taken in a patch where no other variety grows, or buy it from a reliable seedsmen, who should have it grown in this way.

GROWING AND KEEPING SWEET POTATOES.—In the right climate it is not difficult to grow sweet potatoes. The thing to be avoided is damp, deep, rich soil. There the roots go right down into the ground and give you long, slim potatoes of little value. Besides, the vines are bound to root all over the ground. To prevent all this and get short, thick, marketable roots right in the hill, you want a soil scantily supplied with humus, and of but little depth. In regard to keeping, a subscriber of FARM AND FIRESIDE wrote that a successful grower in Kansas, Mr. C. H. Cushing, told him the tubers should be kept only above the freezing point. To verify this, I wrote to Mr. Cushing, and the following is part of his reply:

"My experience is a costly one. When I first went into the business I was told that the potatoes must be packed in dry sand in well-ventilated boxes and kept at a temperature of about fifty degrees. So I spent a great deal of money in building boxes with ventilators running through at short intervals; procured a great lot of sand and kiln-dried it to pack them in. I built a house with double walls filled in with sawdust, put a furnace in the cellar and thought I had everything O. K. I did succeed very well for a few years, but then came disasters. The potatoes must be dug at a certain time, as they will bear no frost if they are to be kept. But the weather was not always favorable; sometimes it rained continually, and the tubers could not be put in dry; sometimes in cold, wet seasons the potatoes were not well ripened, the texture was watery, and I do not think any method would keep them well. At last I became satisfied that most of my expense in the way of ventilating boxes, dry sand, etc., was money thrown away. Then I just piled the potatoes up in boxes or bins in a cellar with fire heat sufficient to keep the temperature as steady as possible at fifty degrees; at least not below forty degrees. There is one point, however, that I think is not sufficiently considered in keeping sweet potatoes, or trying to account for frequent 'bad luck.' It is this: A potato that is not well grown will not keep well by any method, while a potato of just the right structure will bear a surprising amount of ill usage, provided the mercury never goes below forty degrees—that is *always fatal*. The wrong soil or cold, sour weather when the tuber is forming are very unfavorable, and if I had a lot of potatoes raised under such conditions I would unload as soon as possible. Here we aim to plant on dry and *very poor* land. When I say poor land I mean that with little or no alluvium in it. Our yellow clay subsoils, with the surface soil removed, gives the finest possible potatoes, both as to yield and quality. The next best is clear sand, or apparently so. Then with a good high ridge and good cultivation you can get a potato that will keep. The tuber should be short, smooth, and of a bright yellow; that is, if you raise our best and standard kind, the Yellow Nansmond. I can tell by the looks whether a potato can be kept. Our rich bottom lands do not grow good sweet potatoes. They require totally different land from corn or Irish potatoes."

There is a heap of good sense in this letter, and valuable suggestions, too, which should be of great help to the reader. The principle that a good, well-grown specimen will keep better than a poorly-grown one, and that it will stand a large amount of ill usage, applies to many other products of the orchard and the garden besides sweet potatoes.

Orchard and Small Fruits.

CONDUCTED BY SAMUEL B. GREEN.

MARIANA PLUM STOCKS.

A nurseryman in the north of Iowa writes:

"I have received from two different sources advertising sheets lauding Mariana plum stocks, and offering them at \$6 per thousand large enough for grafting, and at \$3 per thousand large enough to set out in spring for August budding. What is your opinion as to their value as compared with our native plum seedlings?"

At this time we have a commercial boom for the Mariana plum stocks. I believe it to be far more valuable for western use in propagation than the foreign commercial

stocks. But as grown in Georgia and the South, I do not believe it will be hardy enough for the north half of Iowa *if budded above the ground*. For root-grafting it will answer, but I do not believe it is as valuable in any way as seedlings of our free-growing native plums.—Prof. Budd, in *Rural Life*.

OTAHEITE ORANGE.

M. D. Welcome says in *Orchard and Garden*:

"I wish everybody had one of these beautiful dwarf-bush orange-plants. The foliage and blossoms are precisely like those of the tree orange. The fruit is quite small. The plant begins to bloom when one year old and blossoms usually three times a year. Mine had more than one hundred white, fragrant flowers in midwinter. There are several ripe oranges on my bush, which have hung there five months. A fine pot-plant, and does well set in the open ground during summer."

This is certainly a very satisfactory little plant for window culture. Mine are in blossom about all the time, and are by far the most satisfactory of any orange-plant we ever had at home. They can be bought at a low price from most florists.

INQUIRIES ANSWERED

BY SAMUEL B. GREEN.

Varieties of Fruit for Michigan.—W. A. H., Detroit, Mich. For your locality I could recommend the following list of fruits as being very excellent, but many reliable horticulturists in your own state could probably improve it very much:

BLACKBERRIES—Wilson Junior, Lawton.
GRAPES—(White) Niagara, Lady; (red) Delaware, Lindley; (black) Concord, Worden.
CURRENTS—(Red) Versailles; (white) White Grape.
GOOSEBERRIES—Downing, Smith.
CHEERRIES—Black Tartarian, Early Richmond.
PEARS—Summer, Bartlett, Flemish Beauty, Anjou, Duchess.
QUINCE—Orange, Champion.

Apple-blight—Timothy in the Orchard.—J. G., Hardin, Ill. Your apple-trees are probably injured by some form of fire-blight, and the only thing you can do is to cut off and burn the dead branches or trees. You should have mentioned what kinds are being injured, for some kinds are not often attacked by blight, while other varieties seem to have a constitutional predisposition to blight.—Timothy in an orchard will not hurt it unless it is left in sod too long, or unless the land is not rich enough to make a good growth on the trees and at the same time grow a crop of grass. For a young orchard I prefer crops like corn, early potatoes or squash, that do not necessitate the working of the soil in the autumn. Anything that encourages the forming of new wood late in autumn is injurious to a tree, and in its weakened condition it is very subject to blights.

Strawberry Culture in North Dakota.—G. M., Willow City, N. D., writes: "Do you think North Dakota too far north for the culture of strawberries? What kind of soil is best for them? How many plants should be put to the square foot? What care do they need in order to make them bear successfully? What kind would you recommend for a farm garden?"

REPLY:—No; strawberries can be raised in North Dakota if proper care is used. They will grow in any rich soil; land that will raise corn will raise strawberries. For garden culture, set out about one plant to the square foot and keep the runners cut off. Set one third each of the following varieties: Haverland, Warfield and Michel's Early. It is necessary to have the last to furnish pollen for the other two. Buy your plants from some reliable Wisconsin or Minnesota nurseryman, and not from agents. Set them early in the spring and they will bear the following year. If your home is on the open prairie, you will find it necessary to put a wind-break of boards or willow brush around the bed to prevent its drying up. The north side of a live wind-break is a good location if not too dry. If the weather is very hot when they are fruiting, the season will be greatly prolonged by putting up a framework four feet from the bed and covering it with willow or other brush that will keep off some of the sun. You will find raspberries more easily raised than strawberries.

Trimming a Neglected Orchard.—M. L., Morse Bluff, Neb., writes: "I have sold my farm and moved to Morse Bluff, and now have an orchard of apple-trees that have been neglected for ten years. What do you think is best to do with it? Shall I prune the trees next fall?"

REPLY:—Your orchard probably needs some pruning, but be very careful how you do it. In Nebraska, a very different system of pruning is needed than in the eastern or central states, for the climate is more trying there. Your best plan is to consult with some reliable horticulturist who has had western experience. I call to mind an illustration of the difference between eastern and western pruning. I know of an orchard of Wealthy apples in Minnesota that was set with good trees and bore a small crop; it was then severely killed back. The owner gave up in disgust and went to California, selling out his farm in Minnesota at a low price. An enterprising young man with good ideas bought it and let about three sprouts grow from each root. In six years he

had a magnificent crop of Wealthy apples that sold at \$1.50 per bushel, and he realized enough from the orchard in two years to more than pay for the whole farm. He has had several crops since, and the trees are in good condition for another crop, but many an eastern orchardist would look on the trees with disgust. Many apple-trees in the West have been injured by too much pruning. There are probably insect pests on the trees that need attention. Probably the land between the trees should be broken up and the trees manured if the land is poor. But it is quite out of the question for me to give you positive directions from my desk without seeing your orchard. I can only throw out these hints. The month of October is a good time to prune, or in the latter part of winter, before the sap starts. The latter I prefer.

Sheridan's Condition Powder.

KEEPS YOUR CHICKENS.
Strong and Healthy; Prevents all Disease.

NOTHING ON EARTH WILL
MAKE HENS LAY
LIKE
SHERIDAN'S
CONDITION POWDER

It is absolutely pure. Highly concentrated. In quantity costs tenth of a cent a day. No other kind is like it. **If you can't get it send to us. Ask first.** Sample for 25 cts. in stamps, five packs \$1. Large 21-lb. can, by mail, \$1.20. Six large cans, \$5, express prepaid. Farm-Poultry one year (price 50c.) and large can \$1.50. Sample Copy Best Poultry Paper sent free. I. S. JOHNSON & CO., 22 Custom House St., Boston, Mass.

Mention this paper.

AT A BARGAIN.

640 acres land, 150 creek bottom in cultivation; fine dwelling, 5 tenant houses, water-power, saw and grist mills, and cotton gin. 1 1/2 miles from Ill. Central Railroad; miles from Coffeeville. For particulars address **JNO. S. LYLE, COFFEEVILLE, MISS.**

PATENTS LEHMANN, PATTON & NESBIT, Washington, D. C. Examinations Free. Send for circular.

SHORT HAND HOME-FREE. Only one student in each town given this privilege. **WRITE NEW RAPID** College of SHORTHAND BUFFALO, N.Y. Send stamp for full particulars.

Williss SHORTHAND Springfield, Ohio. Oldest and largest exclusively Shorthand College in U. S. For 12 years the leading school of its kind in America. No vacation. Circulars free. Address **F. W. WILLISS, Expert Steno., Prin.**

University of the State of New York. AMERICAN VETERINARY COLLEGE 139-141 West 54th St., NEW YORK CITY. 18TH ANNUAL SESSION. The regular course of lectures commences in October each year. Circular and further information on application to **A. LIAUTAUD, M. D., V. M.,** Mention Farm and Fireside.] Dean of the Faculty.

To Make Money Quickly and Easily Secure an agency for **THE REVIEW OF REVIEWS.** "The Busy Man's Magazine," the most popular monthly ever published. The "Boston Globe" says: "To read a number is to resolve never to miss one." \$2.50 a year. Trial subscriptions, 5 months for \$1, on which renewals for a year can always be obtained. Send for free sample copy, terms to agents, etc. Mention this Magazine.

THE REVIEW OF REVIEWS

13 Astor Place, New York.

"THE REVIEW OF REVIEWS is the very best periodical of its kind we have ever had. It is especially valuable to busy people."—M. J. Logan, Editor Home Magazine.
"It is really invaluable."—Edward W. Bok, Editor Ladies Home Journal.

BARGAIN COLLECTION OF BULBS FOR WINTER FLOWERING IN THE HOUSE OR OUT-DOOR CULTURE. **FOR 10¢ TWO NEW OXALIS FOR WINDOW BRACKET.** **THREE DUC VON THOLL TULIPS.** 3 DISTINCT COLORS. Including FREE copy of our Autumn Edition of "GARDENING ILLUSTRATED" and one RARE OR CURIOUS BULB FREE if you mention this paper. Address **Vaughan's Seed Store, CHICAGO, NEW YORK, 88 STATE ST., 12 BARCLAY ST.**

Mention this paper.

CIDER MACHINERY. POWER SCREW HYDRAULIC OR KNUCKLE JOINT PRESS. Graters, Elevators, Etc. **Boomer & Boschert Press Co.** 99 W. Water St., Syracuse, N. Y. Mention this paper when you write.

THE CURTIS STEEL ROOFING CO., Sells Iron and Steel

ROOFING Direct to you at Agents prices. Write for their Guarantee. Address Box 1355, Niles, Ohio.

Our Farm.

CLOVER EXPERIMENTS.

Observant farmers have noticed the habit of the sweet or Bokhara clover, *Melilotus alba*, of growing in the bottoms of brick-yards and in places along the roadside, where the surface soil has been scraped away; these unpromising situations apparently being chosen in preference to more fertile soils. Acting on the hint thus given, the Ohio experiment station in 1888 plowed up, carefully prepared and seeded to melilotus a piece of stiff clay land, part of which had been stripped of its soil some years previous for brick-making, and which had since been very unsatisfactory for tillage. The melilotus was allowed to grow up and fall down, reseeding the ground until the fall of 1889, when a quarter acre of the original patch was plowed and sown to wheat, the same quantity of similar land adjoining, which had been kept under rotation of corn, oats and wheat, being prepared and sown at the same time and in the same manner.

The result was a yield of 18.6 bushels of wheat per acre from the land which had been cropped in rotation, while that which had grown melilotus yielded at the rate of 26.9 bushels per acre, and is again self-seeded with a dense growth of melilotus.

This experiment alone is not conclusive. Probably the wheat crop would have been increased as much at the end of one year as by four years' growth of melilotus; but it was desired to study the habit of the plant in other respects, especially that of self-seeding and continuous growth on the same land; therefore, it was undisturbed until it had demonstrated its ability to maintain itself.

The result is offered as a suggestion to farmers who have refractory and unproductive clays which they may wish to ameliorate cheaply. It must be remembered, however, that the melilotus has the habits of a weed and must be kept in check; but this is easily done.

As the melilotus belongs to the same family of plants as the clover, it will be understood that its growth probably adds actual fertility to the soil, in addition to the physical improvement produced by its deep-growing roots. It may be sown broadcast in the spring or in July, at the rate of eight or ten pounds of seed to the acre.

EXTRACTS FROM CORRESPONDENTS.

FROM MISSOURI.—Dunklin county is in southeast Missouri. I live in what is called West Prairie. Though the county is well timbered, the soil is a sandy loam mostly underlain with clay, making it very rich. Watermelons, Irish and sweet potatoes are in their natural element. All kinds of fruits and vegetables that will grow in this climate come nearer reaching a state of perfection here than anywhere in the state. We have the best watered country in the world. This is saying a great deal, nevertheless it is true. We use the force-pump. We have only to drive it twenty-five or thirty feet and we get the cleanest and coldest water I ever drank. Corn and cotton are our staple crops. Cotton, on account of depression in prices, is fast giving way to wheat, oats, rye and hay. Clover, timothy and herd's grass grow well. If there is any place that the stock pea pays, it is here, both as a hay crop and a fertilizer. Improved land ranges from \$15 to \$30 an acre. For the most part our people are industrious and generous, though we have some dead beats who have dropped in on us that we would like to swap for better citizens. I. L. C.

Clarkton, Mo.

FROM NEW HAMPSHIRE.—The main trouble here is that the farms, instead of being deserted, are sold to a man who has more land now than he can properly attend, and the man who sells goes west or south, or into the city. Why should not New England farms be occupied when land can be bought cheaper than United States government land? If the land was twice as thickly settled as it is now, farmers would not have so much to say about "hard times." If the land is two thirds rocks and mountains it makes a first-class sheep pasture. The land is good for fruit growing and the raising of garden products, and farmers are beginning to take up these branches of farming to supply the summer boarding industry and manufacturing places, which are increasing each year. The last year was one of more than usual prosperity for the farmer, and good yields, higher prices and more active demands for his products have prevailed. Dairying is carried on very extensively, and the county is becoming quite thickly dotted with creameries. The annual report of the state board of agriculture contains the following interesting statistics: Horses in the state, 71,276; oxen, 19,401; cows, 112,706; other cattle, 46,827; and 119,999 sheep—a gain of 3,328 horses and 1,377 cows, and a decrease of 3,945 oxen, 8,101 other cattle and 10,365 sheep. C. P. O.

Lyman, N. H.



AFTER HARVEST

When the golden grain has been shocked and put away, and you see the good results of a hard but prosperous season's work, your thoughts are most likely turned towards the purchase of a new Buggy and Harness, and you say to yourself, what make shall I buy? The answer comes to you quickly—THE CELEBRATED

MURRAY \$55.95 BUGGY and \$5.95 HARNESS of course. They are **Better than Gold.**

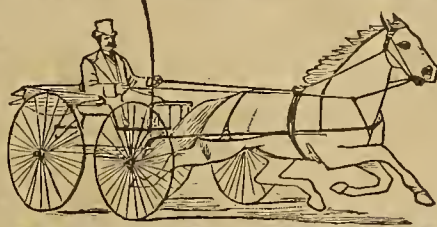


Their reputation for style, strength and durability being world-wide, are known the world over and are justly recognized as the BEST and CHEAPEST Vehicles and Harness on the market. They are sold direct to the consumer at prices beyond competition. No middleman nor agent gets in between them and the consumer to increase the price of their goods.

Do you wish to purchase a Buggy or Harness this year? If so, and you want value received for your money and something BETTER THAN GOLD, there is but one make to buy, and that is the celebrated "MURRAY."

Write for our large, illustrated Catalogue, containing full description and prices of our "MURRAY" VEHICLES and HARNESS. We will mail it to you FREE. Mention this paper when you write. Address all letters to

THE WILBER H. MURRAY MANUF'G CO., MURRAY CINCINNATI, OHIO.



Many Firms Make Big Claims But We Prove our Words by Deeds AND WILL WAGER

ONE THOUSAND DOLLARS with any Carriage or Harness firm in the U. S., same to be given to any charitable institution by the loser, that we can show more honest and better testimonials for the "MURRAY" Buggies and Harness for the time our goods have been on the market, than any one factory in the world.

FROM ALABAMA.—Cleburne county, bounded on the east by Georgia, has a population of 13,600. The soils are gray, sandy, black, stiff land, red clay, etc. The people of this county are engaged almost exclusively in agriculture, though minerals are found in large quantities. This is a well watered county, thousands of streams traversing it. The north-eastern portion of the county is somewhat hilly and interspersed with rich and productive creek lands. The Tallapoosa river flows across the county. The surface of the county is advantageously diversified by rich, smooth bottoms, beautiful slopes and fine, rolling uplands. The soil is very fertile, and produces a good yield of corn, cotton and all kinds of small grain and all kinds of fruit. The county is covered with inexhaustible quantities of fine timber, such as post-oak, black oak, red oak, hickory, poplar, sweet and black gum, pine, walnut, etc. Cleburne county is traversed by the Georgia Pacific railroad and the East and West railroad. It has an elevation of from 2,000 to 2,500 feet above the sea, and is entirely free from malaria, and without a stagnant pool of water. The citizenship of the county is made up of people from the best families in the state. The population is almost exclusively white. Society is as good as can be found in any section of the country. There is as small a percentage of crime in proportion to the population as anywhere in the United States. All the leading denominations have churches throughout the county. The farms of Cleburne county will raise all kinds of grain. Wheat, oats, rye, corn, cotton, tobacco, millet and sorghum are the leading products. This is a natural garden region. All kinds of fruit and melons grow here in profusion. Several nurseries are in successful operation, and gardening has proved a success. Edwardsville is the county-seat, and is located in the center of the county on the Georgia Pacific railroad. Lands, improved and unimproved, are cheap, and can be bought on favorable terms. Lands rate from \$1.50 to \$20 per acre. There are good schools and churches in every community in the county. There are many inducements to any one desiring to invest his capital here. While the county and the towns are good places for those seeking homes, they are also good places for persons desiring to make investments in real estate. W. J. B.

Rosewood, Alabama.

FROM NEBRASKA.—Having been one of the original homestead settlers of Nebraska, when wild cattle and wolves were its only attractions, having followed farming steadily for nearly seven years, having prospected by wagon the entire state, and not being interested in selling real estate, I deem it no egotism to say that I am competent to sound the praises or proclaim the drawbacks of the state. I live in what was a portion of old Cheyenne county when I took out my homestead papers. I have traversed its territory yearly in nearly every direction. I can truthfully say, from a farmer's point of view, that this portion of Nebraska cannot be excelled for its excellency of soil, climate or scenery. Although dubbed the "American desert" by some, it is, when rightly tilled, a fairly good, all around agricultural country. Its mild winters and perpetual pasturage make it a stockman's paradise. We have no blizzards (properly) nor cyclones, very few electric storms and no hail in the valleys proper. All that is needed here to make farming a success without irrigation is thrifty, industrious, intelligent farming, adapting it to the nature of the soil and climate. We who are not irrigating this year have everything as nice as the wet-land farmers, with less smut in our wheat. However, irrigation is a benefit in case of drought, and the cheapness and ease of getting it here warrant farmers in its use. By this time next year every acre of farming land in this county and all down the Platte valley will be under water. Let the good work go on. Our threshing is progressing, and wheat and oats are yielding 25 and 30 bushels per acre. All kinds of vegetables are excellent. There has been no perceptible effect in the last two years by drought on any lands properly cultivated. This will be a veritable garden for small grains, as the past two seasons have demonstrated. Flouring-mills, steam threshers and binders are multiplying fast. Corn also does

well, and is a sure crop when listed. Quarters (deeded) are going like hot cakes at from \$8 to \$12.50 per acre. Tree claims and other undeeded lands can be had at from \$300, \$500, \$800, and \$1,000, according to location, etc. No government land can now be had, unless it is back on the table lands, which are subject to too much hail. This county has no railroad yet, but two are heading for us, and before spring we will hear the old familiar locomotive puffing through our beautiful valleys. This will complete our glory, as we have towns, churches and every necessity of civilization.

Gering, Neb.

A. V. F.

FROM MISSISSIPPI—COAST COUNTRY.—Still lingering in this delightful climate and enjoying the charming attractions which this coast country affords, I can give your readers, from personal observation, some further facts pertaining to this section of the country. The coast country along Mississippi sound has long been a summer resort for southern people. Situated on the northern shore of the Gulf of Mexico, lying high and dry above the sea, there is no wonder that wealthy people from New Orleans, Mobile and other southern cities seek its friendly protection from the heat of summer. The weather is never excessively hot nor very uncomfortable, except, perhaps, for an hour during any summer day, for refreshing breezes are sure to come landward, laden with freshness and the health-giving odor and elixir of the brine of the sea. Just now the coast towns and cities are swarming with visitors—people who occupy during the summer months their own cottages and villas. Many others rent cottages for the summer season, besides hundreds of transient visitors, who crowd the hotels and boarding-houses. During the recent torrid term, which was nearly general throughout the northern states, the thermometer, standing on the gallery, or porch, against the southwest side of the house we occupy, reached 92° but once, and then only for an hour, for the sea breeze came, and it soon fell several degrees. The temperature during the warmest weather, aside from the above occasion, has been comfortable and pleasant, with an average of about 84°, while for the balance of the time the mercury has lingered in the neighborhood of 78°. Besides, the rains (which have been rather more frequent and copious than is usual, I am told) have refreshed the earth and its inhabitants in this region during the warm weather. The charms of this coast have been often told in prose and poetry, yet they are ever new. The able and brilliant founder and life-long editor of the Louisville Journal described them in glowing verse to his wife, in 1846, inscribed, "To One Afar." A nature so full of the spirit of poetry as was his needed only such inspiration as he found all around him here to fire his poetic genius and impel him to pour forth his impassioned soul in the exquisite lines referred to. They may be found in several compilations of miscellaneous poetry from the sweetest singers the world has produced. The gifted Prentice has long since joined the silent majority, but the beauties and attractions his wizard pen portrayed still remain to gladden the hearts of those who love to look at Nature in her loveliest garb. The boating, bathing and fishing here are unsurpassed. The sound and Biloxi bay at this point are lined a short distance from the shore with bath-houses, where every day hundreds of people enjoy a dip. Invalids come to obtain benefit from sea baths, numbers of them from a long distance. Every day the sound and adjacent waters are dotted with the white sails of sail-boats, yachts, etc. Regattas are frequent with pleasure parties. The fishing is excellent. The writer hooked a fine specimen of the "red-fish"—enough, and more than enough, for the family meal—in a few minutes after casting a line this morning. These waters are full of fine fish, as fine as are found in the Mexican main. A former letter in these columns brought many letters of inquiry, which were cheerfully answered. Let me suggest to those who, inadvertently no doubt, forgot to enclose a stamp to pay postage on the answers they received, that while the undersigned will gladly furnish desired information (at some loss of time and expense for stationery), he modestly prefers that the beneficiary of the answers written in response to questions shall send a

postage-stamp, which must adorn every letter transmitted in Uncle Sam's mail-pouches. I have watched the progress of the seasons and the outcome thus far of the products grown on the coast, and it has been accompanied with much satisfaction. One frost in the spring did considerable injury to strawberries and hurt the early peaches and pears. I am told that it was unusually severe; that a frost at such a time rarely occurs. Strawberries, however, recovered very soon and the strawberry season was a long one. Some vegetables were checked in growth, but were in market in a few weeks thereafter. The influx of people from the cities makes a sharp demand for everything raised, and large quantities are of necessity brought from New Orleans. A few items about peaches, pears and grapes, raised this year near this place, must suffice for this letter. Parker Earle & Sons have a large but young fruit farm two miles from this place. Their peach crop this season was seven hundred bushels of marketable fruit, which averaged \$3 per bushel. They have also a young vineyard, from which they sent away 25 tons of marketable grapes, for which they received a trifle over five cents a pound. It will be recollected that fruit raised here is the first to reach market, either south or north, except what southern Florida can forward. A grower of Le Conte pears, three miles from town, sold a considerable portion of his crop for \$2 per bushel, some for \$1.50, and the poorest fruit for \$1 per bushel. This man has 3,000 trees, old and young, mostly young. In four years they will all be in bearing. His oldest trees—12 years—average ten bushels to the tree in favorable years. In five years his crop will probably average not less than three and one half bushels to the tree, some yielding ten bushels per tree. That will be 10,500 bushels. The money received for five hundred bushels will more than pay for the labor, packages and freight, leaving, even at \$1 per bushel, \$10,000. It is proper to say that this coast is not only a summer resort for southern people, but is becoming more and more, as its attractions become more widely known, a resort for northern people during the winter months.

Ocean Springs, Miss.

T. H. G.

BICYCLES GIVEN AWAY
FREE TO BOYS & GIRLS UNDER 15.
If any Boy or Girl wants an elegant High Grade Safety Bicycle (26 inch wheels) free on easy conditions, write at once to the Western Co., 334 Dearborn St., Chicago, Ill.

WHEREVER THE **ROCKER WASHER** is used the Washboard becomes a **Relic of Barbarism**. It is warranted to do the washing of an ordinary family in one hour as clean as can be washed by hand. Write for full description and prices. **Rocker Washer Co., Fort Wayne, Ind.** Agents wanted.

GOLD RINGS GIVEN AWAY.
AND
Silvered Spoons
Every Boy, Girl or Woman who wants a Solid Gold Ring or 12 Silvered Teaspoons for nothing should send us their name on a postal card and mention this publication. Address **HOBB'S MEDICINE CO., Chicago, Ill.**

GRAND OFFER FOR 30 DAYS.

A fine \$25 watch to every reader of this paper. Cut this out and send it to us with your full name and address and we will send you one of these fine 14 K. gold plated inlaid watches. The base of the case is made of fine jeweler's metal which is guaranteed to wear 20 years. The movement is beautifully jeweled and damasked throughout. You examine it at the Express and if you are satisfied it is equal in appearance to any \$25 gold watch you pay the agent our sample price, \$3.85, and it is yours. If you will send the cash \$3.85 with your order by registered mail, thereby saving us the express charges, we will make you a present of a fine gold-plated chain to match the watch. This offer will not be made again. Remember we send our guarantee that the watch can be returned any time within one year if found otherwise than represented. Address at once, **KEENE'S Mammoth Watch House, 1301 Washington street, Sample Dept. 12, Boston, Mass.**

Mention this paper when you write.
Always mention this paper when answering advertisements, as advertisers often have different articles advertised in several papers.

Our Fireside.

NAMELESS.

There is no name, no mark, no sign,
To tell who lies below
The tall, rank grass, where daisies shiue
And pale primroses blow;
Yet mournfully the linden wave
And sunbeams gently play,
As if within that nameless grave
An exiled monarch lay.

No monarch sleeps a whit more sound
In dim cathedral isles
Than this poor heart in earth's green bound
Beneath the sun's glad smiles,
Though it may be that alien earth
Entombs his lifeless clay,
Far from the land that gave him birth,
He rests in peace to-day.

Did friends around his death-bed watch
And wait his latest sigh,
With parted lips, as if to catch
His ling'ring fond good-by?
Or did he die an outcast lone,
With none to pray or weep,
With none to hear his dying moan
Or close his eyes in sleep?

Did death come to him as a friend
That brings repose and peace,
And bliss that ne'er shall know an end,
And joy that will not cease?
We only know he sleeps below
The daisies and the grass,
Where, ever tenderly and slow,
The lingering sunbeams pass.

—Chambers' Journal.

JOHNSON'S FORTUNE.

I'VE done my best, mother," Farmer Hobbs said, coming in hot and tired from the hay-field. "That there dratted machine won't work, and ef I am to save my hay, I'll have to take that intrust money and buy a new machine."

"I think you'd better not, father," Mrs. Hobbs answered, in mild alarm. "I don't know where you're goin' to get any more, and Johnson is powerful' clost about gettin' the money on time. I'd be afeard to let it run over a minute."

"Well, but, Lucindy, the hay's wuth more'n the intrust, and you know they's uo takin' the stock through the winter without it. The cattle might kinder rub along, but the horses is jist plum ableeed to have their timothy, and my timothy is as fine a piece as you ever sot eyes on."

"Suppose you try again," Mrs. Hobbs suggested, helping her husband to a luscious quarter of raspberry pie. "I'll go out with you and help onchoke her, and we'll use plenty of ile, and mebbe you can ruh through jest this oncet."

"Well, I'll try, Lucindy, I hain't no hopes, but I would like to save that intrust money."

Mrs. Hobbs stayed in the field till five o'clock, and the hay was cut with few delays. The girls brought out the supper, which was eaten with much relish in the hay-field. The horses being watered and fed, the work went on by the big harvest moon, and at ten o'clock the hay from the "big medder" was in the stacks.

A few days after, Jim Johnson came out to see if the interest money was ready. He tied his horse under a tree and started through the meadow to see Mr. Hobbs, who was feucing his ricks at the other side.

"Moses and the hullrushes! What's that?" he asked, gazing at glinty blue reflectious floating on pools of water standing everywhere, for it had rained heavily the night before. "Oil, and no mistake!" he went on, after dipping his finger into a puddle and testing it carefully with his nose.

It was only the day before that the papers had contained an account of some new oil-fields found not above twenty miles away; an old partuer of Jim had been the first to invest, and was consequently fabulously rich.

Johnson carefully rubbed his finger on his pocket handkerchief, stowed the latter in a deep pocket and hastened across the field, his face pale and his eyes glittering very unpleasantly. He tried to greet the farmer with his accustomed familiarity, but his words came by jerks and in gusts, and his throat became so dry that he could scarcely articulate.

"What's the matter? Hain't you well?" Mr. Hobbs asked, suspending his work to gaze curiously at his visitor. "You look taller-colored as the dead, an' your eyes is like burnt holes in a blanket."

"No, thank you, not at all," Johnson replied at random. "I'm quite well, except husky sore throat—are you well? And the family?"

"Pretty fair—we've got a good deal of health mixed up amongst us—you know they's twelve all told."

"Yes, a large, interesting family—want to sell the farm?"

He tried to make the question less eager, but he could not quiet the tremor in his voice, and he was in mortal dread lest Mr. Hobbs should have some reason to cross the field and see the oil, when his "cake would be dough," as he mentally expressed it.

"No," Mr. Hobbs replied shortly, and went on with his work.

"I'll give you a good price for it—I want it for a combination shoe factory. Set a figger."

"Well, twelve thousand—a thousand apiece," said Mr. Hobbs, jokingly; the farm was not worth more than a third of that sum.

"I'll take it," with a gasp. "Here's fifty to bind the bargain, and I'll fill out a check for the balance right here."

He did so, and handed the paper to Mr. Hobbs, who kept his countenance and received it with perfect gravity. Privately he was convinced that Johnson was crazy.

"Come to the house and sign the contract for the deed."

"All right."

Mr. and Mrs. Hobbs accompanied Johnson to town, and were thunderstruck when they learned that the sale was real, and that they had twelve thousand dollars in the bank.

"Seuse that Johnson hain't crazy," Hobbs began as soon as he was clear of the town, "why, they's somethin' in the wind. It may be a shoe factory, but I don't believe it. I wonder ef they've found gold?"

"It don't make no sort o' deference to us, father," Mrs. Hobbs answered. She was afraid that her husband would take alarm and want to "rue hack," as she expressed it. "No, it don't make a grain o' deference to us, an' we've got enough for the place ef they find dimints. I never did like it, an' I don't keer how soon we git away. Let's huy back our six acres on the edge of Cloverdale. We can git it for three thousand, an' then you'll have nine thousand to put out at intrust."

"Yes, mother."

"And we kin git little Jim his cornet and send him off to be learnt to play."

"You kin do jist as you please, mother. I'm rich enough now, I reckon, to do as I like, and I hope I won't never want to do nothin' very bad."

"That's somethin' you never did do, father," dutifully replied his wife, "and I don't believe hein' rich is a-goin' to change you much. If it would I'd want somethin' to come along and take the money away from us, because it can't never pay to give up doin' good."

As soon as the transfer was made and the deed recorded, Johnson sent the following telegram to his whilom partner:

"Come on—bring all your loose cash—oil in abundance."

The cash was at with instructions to buy adjoining farms on option of thirty days; the oil man would come later and hring an expert.

The farms were bargained for at ridiculously low figures, and then Johnson invited his friends out to see his "find."

"I tell you, boys," he said, as he rode up and tied his horse to the meadow fence, "the whole earth is jist a-soakin' with it, and it's jist burstin' out of the ground. You see this country has never had any oil taken out of it," he went on glibly, "and as it is constantly generating it has become so chock full that the ground can't hold it and it's compelled to come out. You'd be astonished to see how it is actually boiling up."

"It must be wasting if it is in that condition," some one remarked.

"What's a waste of a few millions o' barrels?" scornfully retorted Johnson. "There's enough left for me and my family and all my poor relations."

By this time others, having heard the news, had arrived at the farm, and quite a crowd had gathered when the partuer with the expert drove up, followed by Mr. Hobbs.

"Just wait until you examine these blue patches," Johnson said to the two men after they had alighted from their buggy. "Now tell me if you ever saw a surer indication of oil?"

The expert gave a glance over the field, took a quick survey of the conformation of the country, and opened his lips to speak; but before he could articulate a word, Mr. Hobbs broke into the conversation with a remark that sent the cold chills down Johnson's spine.

"And is it them blue patches that indicate ile?" he asked, with a glance half pitying, half contemptuous. "That's a fact, for I used mor'n two gallon on my ole mowin'-machine, a-tryin' to git through the season without buyin' a new one."

"Let this be a lesson to you, sir," said Johnson's partner.

"All the lesson I git out of it," again put in Mr. Hobbs, "is that when you are a-cuttin' hay use plenty of ile."

"It's a—swindle!" Johnson broke out, livid with rage. "And I'll land you in the pen before this is over."

"Don't talk to me about swindling," Mr. Hobbs began, advancing upon Johnson, who retreated to his buggy. "Who was it swindled the Widow Robinson out of her property and drove her to commit suicide? Who was it that swindled the people out of their taxes and barely missed the pen? Who was it that swindled—"

Johnson gave his horse a lash with the whip and drove rapidly away.

"I didn't know nothin' about this ile business until this mornin'," Mr. Hobbs explained to the people present. "I knowed they was somethin' up, but I had no idy what it was, for I supposed every blamed fool in the country would know machine-ile on a medder after a rain." —Waverly.

TALKING WITH MONKEYS.

If a person should be cast upon an island inhabited by a strange race of people, whose speech was so unlike his own that he could not understand a single word, he would watch their actions, hoping to gain some idea of their meaning in that way. Gradually he would learn to associate a certain sound with a certain act, until finally he would be able to understand the sound without seeing the act. In such a way missionaries often have to learn to converse with savage tribes.

It is in a very similar way that I have learned to talk with monkeys, only I have been compelled to resort to some very novel means of doing my part of the talking. It had been my belief for many years that animals of the same kind could talk to each other. I thought if I could learn to talk their way I might converse with them and know just what they meant when they made sounds. But I found it difficult to imitate some sounds made by some animals; in fact, I could not hope to ever learn to utter them correctly.

After observing many kinds of animals, I found that monkeys had a greater number and variety of sounds than any other animal, as far as I could determine, and I set out seriously to learn to make those sounds as well as I could. But I soon found that each kind of monkey had a set of sounds of his own, and also that very few of them could be imitated by the human voice. But I hoped to learn the meanings of some of them, and whether they were really speech. I tried very hard, but I could not imitate them well. A monkey has such a sharp voice, and it is very difficult to make the same sounds with the human voice.

At last I fell upon a plan by which I could make them think I was a great-grandfather monkey. I got a phonograph and took it to an old monkey's cage; every sound she made was recorded by the machine. When the record was repeated to other monkeys they instantly recognized the sounds, and looked about for the speaker. This was the first time that any sound of the lower animals was ever put on record by any means whatever.

I went to Cincinnati, Chicago and other cities, and made records of many kinds of monkeys. Then I would take the sounds made by a monkey in Chicago and repeat them by the phonograph to a monkey in Charleston, and notice what that monkey would do. Moreover, I would sit and repeat sounds to myself until they were perfectly familiar, and then I would try to imitate them. I finally was able to imitate a few of the sounds well enough to make a monkey know what I said to him. By watching carefully what a monkey would do at certain sounds, of course I gained an idea as to the meaning of those sounds.

Their way of talking is very different from ours. For example, if a monkey is hungry he will use one certain sound, and he will use that same sound when he means "to eat," or means anything whatever about food or hunger or eating. The word is a little like our English word "who." Phonetically it is very nearly represented by the letters "wh-u-v." I have a fine graphophone record of the chimpanzees in the zoological garden at Cincinnati, and I can repeat some of the sounds with my own voice with very little effort; but I have not had an opportunity of studying them sufficiently to know what any of them mean yet, but they are not difficult to speak.

A small monkey named Jennie was one of my little teachers. Before visiting her I was warned by her master that she did not like strangers, and that I must be very cautious with her or she would do me some harm. At my request he had Jennie chained to a small tree in the side yard, and forbade any of the family entering it. When I approached her she was entirely alone. I went up to her with the salutation which I have described as meaning food. She responded with the same word. I approached and gave her first a peanut or two, then a pecan, which she held up to me, uttering a peculiar sound. I did not know what it was, nor had I ever heard it before, but I procured two stones, a large one and a small one, when she proceeded at once to crack the nut with great dexterity.

I must confess that I am in great doubt whether monkeys do this until they have been taught by man to do so, for I have seen many monkeys who had no idea of the act till shown how. While I am aware that monkeys do many very human-like things, I think they are accredited with many things which they do not really perform. People see them do certain things and they imagine the rest, to make out a complete act. The chimpanzees in Cincinnati eat their food with knife and fork, drink from a cup and use a napkin, but they have been taught by man.

One of the objects of my studies has been to learn just what their own mental resources are and what ingenuity they possess without having had any teaching from man, and as far as my own experience goes, and Mr. Stanley and others confirm my opinion, such acts are far in advance of any simian idea. I think they really talk as far as it is actually necessary, but that they have only the very simplest rudiments of speech—are not capable of carrying on a conversation of any length; that they have only the means of expressing their natural wants and doing that in the very simplest manner.

If a monkey wants something to drink he uses a sound nearly like "eegk," which is quite sharp, and he repeats it so rapidly that we might think he had made quite a speech, when he had only said over and over that one word.

I have not confined my studies to monkeys alone. I have made many phonographic records of lions, tigers, dogs, cats, parrots, macaws, and men of many races, and among the records I have some very curious sounds; and I think I shall be able to show that certain sounds are made by animals that have certain kinds of jaws, and that length of the jaw is an index to the power of speech.

I am aware that many people shake their heads and declare that the sound made by the lower animals are unlike those made by man, and they try to believe that only man can talk. But the facts remain the same. In what way can man be injured if it can be shown that other animals can talk? Other animals see, hear, taste and smell, as men do; they hunger, thirst and think; they are conscious of pain and pleasure, and are capable of expressing sensations received from without, or conceived within; and we know that the only motive of expression is to convey an idea to another. Animals make voluntary sounds, which others hear and understand, reply to and obey. In what respect is this not speech?

From the fact that monkeys construct a whole sentence with one word of our sound, I have coined the word "monophone" to describe their language. Each species has its own peculiar tongue, and they do not seem to try to learn to speak that of any other kind. When two different kinds are caged together they learn to understand but not to speak each other's language. The same sound does not mean the same thing in all tongues. They produce the sounds with the vocal organs the same as human speech. From the rudiments contained in their speech the forms of human speech could be developed. The phonograph reveals many coinciding features.

I think I have interpreted six words of the Cabuchin speech beyond all reasonable doubt, and I shall soon have three or four more. I think they only have nine or ten roots, which are modified slightly in uttering, so they may have in all from thirty to forty words.—R. L. Garner, in Waverly.

AUTUMN CARE OF ROSES.

Roses have enemies, but it is not nearly so hard to succeed with them as many flower lovers suppose. Most insect pests yield to sprinklings of hellebore in water or kerosene emulsion. Rose-bugs are not very troublesome on a clay soil, and such a soil is well adapted to their needs. We never take our roses from the ground to protect them, having learned that it can be done much more effectually where they stand. What is called an "open" winter is much more severe upon roses than is steady cold, even though it be below zero. Our method of protection for winter is to draw the earth up around the base of the plant for perhaps six inches. A quantity of leaves is then put over it, and the whole is covered with bagasse—the refuse from an amber-cane mill. Evergreen boughs are equally good over the leaves, and I have no doubt but that corn stalks might answer if there was no grain to draw mice. It is not safe to remove all the covering from the bushes at once in spring, as a cold, dry wind does them as much injury as a freeze. We throw the coarse litter from the top, remove the leaves and throw back the litter, leaving it till the branches have time to dry off and harden. Then all the covering is removed, the bushes are pruned, the earth leveled and cultivated and a generous coating of stable manure is worked into the soil. Roses should not be covered until the approach of real winter. On that last day when the ground freezes a little all day, put them into their winter overcoats, and the chances are that their sleep will be sweet and their awakening joyous. We rarely lose more than one bush in a dozen, and that is not discouraging. Roses are not greatly injured by light frosts, and the ever-bloomer will yield a handful of buds almost until snow flies.—American Garden.

AN ACTIVE MIND.

People who have passed all their lives in the steady jog-trot of some regular line can hardly realize sometimes that it is necessary to expound one's ideas. But the following shows the advantage of having an active mind.

"Of what use is all your study and your hooks?" said an honest farmer to an ingenious inventor; "they don't make the corn grow, nor produce vegetables for market. My Sam does more good with his plow in one month than you can do with your books and papers in a whole year."

"What plow does your son use?" said the inventor, quietly.

"Why, he uses —'s plow, to be sure. He can do nothing with any other. By using this plow we save half the labor, and raise three times as much as we could with the old wooden concern."

The inventor quietly turned over one of his sheets and showed the farmer a drawing of the lauded plow, saying:

"I am the inventor of your favorite plow, and my name is —."

The astonished farmer shook the ingenious man heartily by the hand, and invited him to call at the farm-house and make it his home as long as he remained in the neighborhood.

The Best Dressing
to preserve
the fullness, beauty,
and color of
the hair
is
Ayer's Hair Vigor
Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.

UNCLE SIDNEY'S VIEWS.

I hold that the true age of wisdom is when we are boys and girls, and not women and men; When as credulous children we know things because we believe them—however averse to the laws. It is faith, then, not science and reason, I say, That is genuine wisdom; and would that, to-day, We, as then, were as wise, and ineffably blest As to live, love and die, and trust God for the rest.

So I simply deny the old notion, you know, That the wiser we get as the older we grow. For in youth all we know we are certain of; now The greater our knowledge the more we allow For skeptical margin; and hence I regret That the world isn't flat, and the sun doesn't set, And we may not go creeping up home, when we die, Through the moon, like a round, yellow hole in the sky.

—James Whitcomb Riley.

AN AMERICAN WOMAN IN JAPAN.

When we went to Osaka, says Mrs. J. K. Goodrich, in the Boston *Advertiser*, the only foreigners there were two Italian officers in the arsenal, who could speak no English. We managed to exchange ideas in French, but our intercourse was very limited, and for a time I was reduced to nearly absolute silence when my husband was occupied. In about three months, however, I had absorbed sufficient Japanese to go shopping and visiting, and then I began to enjoy life. I shall always be glad that these first two years were passed in the interior, because the treaty ports have lost so much of the national characteristics. Why, in Osaka there was not a chair to be found. We drew sketches of the furniture that we required and a Japanese carpenter made it for us—just some chairs, beds and tables. Fortunately we had taken our hair mattresses with us. For some time we could get no cups with handles, and at last by good fortune found a small service in a store on exhibition as foreign ware. We found servants, however, who understood European cooking, and to my joyful surprise I found that we were not compelled to live on rice and tea.

I found in calling on Japanese ladies that my American dress was extremely awkward, as chairs were unknown, so I speedily adopted the native costume and very soon could "suwar!" (sit down on the floor) as well as any of them! I have always felt, too, that my doing so gave me peculiar advantages in my relations with them. They regarded it as a compliment, and were more at ease with me sitting on the floor in dress like their own than if I had retained my American garb. I do think that the very sweetest women in the world are in Japan! Such gentle, tender little mothers! Such devoted little wives! Such bewitchingly childlike little creatures! I assure you that some of my very warmest friendships are in Japan.

Another circumstance that placed me on an especially favorable footing was the edict of the empress, soon after my arrival in Japan, that no one should appear at court except in European dress, which enabled me to be of real service. The poor little things did not know how to dress themselves, and although, of course, there were missionaries and their families, the feeling of caste is very strong in the upper classes; and they regarded the missionaries as below their own social standing, so would not come in contact with them. My husband's official position, however, gave me the entree to the governor's circle, and they took me to their hearts very readily. Consequently my wardrobe was on exhibition to all the women, and, indeed, the men as well, because they were anxious that their wives should have everything correct, and showed much interest. Of course, I could help them tremendously in this way. One day, for instance, a lady received me in a superb Paris gown and wearing men's boots and socks! I showed her what she ought to wear and won her eternal gratitude. But they never have become really reconciled to the dress, and the shoes are particularly objectionable. Many times ladies calling on me have asked my "honorable permission" to remove their boots, and on one occasion at a garden party given in my honor the hostess asked if she might remove her corsets, and on my begging her to make herself comfortable, proceeded to divest herself of them then and there, much to my amusement. The empress rescinded the edict about three years ago, and now it is optional whether they wear European or native clothing. They have adopted the wearing of rings and breast-pins, but not bracelets. The empress never appears in public in native dress, except at a certain yearly festival, at which both she and the emperor wear it. She is a pretty woman, with a very sweet expression, and is well educated. She dresses handsomely and in good taste. I remember once seeing her in blue velvet, trimmed with chinchilla, and with a dainty Parisian bonnet of blue velvet.

NOVEL USE FOR AMMONIA.

Years ago, when I was a youngster, I became an assistant of Doctor Blank, the superintendent of a public insane asylum. As in all insane asylums, some of the patients were docile and tractable, and had the freedom of the high-walled garden, while others, being violent and dangerous in their madness, were confined to their rooms. Sometimes one of the last-named gentlemen would get loose, a fact he usually announced by breaking things generally, upon which announcement the doctor would repair to the spot, and advancing upon him with a steadfast gaze would march him off to his room.

We had one lunatic by the name of Jones,

large and strong as an ostrich. He had broken out of his room two or three times, but had always gone back docilely when any one of us made his appearance.

The asylum had a saloon in the center, with a door at each end; and one of the doors requiring repairs, a carpenter was engaged upon it, when in trundled Mr. Jones and quietly possessed himself of a long, sharp chisel. When the carpenter looked around the madman grinned and poked the chisel at him, whereupon the man of chips scuttled out and locked the door. Then, while the enemy was battering away at it, he rushed around and locked the door at the other end. Having thus caged Jones, he gave the alarm, and I, supposing it was an ordinary case which I could control, unlocked the door and entered boldly, whereupon he made a rush at me. I incontinently bolted.

The doctor was sent for. He soon came, reconnoitered through the keyhole, and ascertaining that the enemy was at the other end of the room, he opened the door and saw at once that he could do nothing with the maniac. Here was a dilemma. A crazy individual, as strong as a bull, perfectly uncontrollable and in possession of a weapon. To capture him by force was a difficult and dangerous undertaking, and to starve him would be a tedious affair. But the doctor did not hesitate long.

"Alfred," said he, "go down into the surgery, fill the largest syringe with hartshorn and bring it up."

I caught the idea, rushed down and brought back a quart syringe with hartshorn diluted, for I did not want to kill the man. Then the doctor, the carpenter and myself formed an army of invasion. We threw open the door and entered in the following array: I, being the shortest of the three, marched first, holding a chair in front of me by the back, so that the legs might keep off a rush if our popgun should flash in the pan. Then came the carpenter, with the syringe resting on my shoulder, like a piece of flying artillery. Finally, in the rear, in the safest place, like a good general, came Doctor Blank.

The lunatic sat at the other end of the hall, on a chair, eyeing us keenly and savagely. Slowly, very slowly, we advanced toward him. The nearer we got the more wicked that chisel looked and the handle seemed to increase until it was very, very long. When we were within a few feet of him he jumped up and sprang toward me. Whiz! spatter! splash! went the quart of hartshorn into his countenance; down he went like a log—it would have knocked down a battalion—and while he was catching his breath we caught him.

SOME DAYS.

At the end of a busy day it is often a painful reflection that little or nothing has been accomplished, in spite of all our pains. Heart and brains and hands have been filled to the utmost. There have been no idle minutes in which to sit down and rest, yet we cannot show what work has been done, what business finished that is not to be recommenced on the morrow.

At such times there may be comfort in the thought that there has been inward growth of no less importance, although its results cannot be as accurately weighed and measured as can the commoner duties of life.

A day is not wasted on which, amid the friction of innumerable petty trials, we learn lessons of patience. Time in which we study a gracious forbearance is not spent in vain, although we had planned to spend it in labor which would have showed finer achievements. It is not even in vain that we conquer a rising anger before we can quietly begin the study.

FROM TOP TO TOE.

Tacoma has a ladies' rainy-day club, the chief purpose of which is to encourage ladies to wear on wet days dresses that do not reach below the ankle. The reform is sensible enough to work during the dry days, too. We should think, however, that the reform would not stop there. While every lady looks better with bangs than without, the bang of a rainy day is so distressing that it ought either to be improved through some as yet undiscovered chemistry or abolished until the sun shines. We are aware that it is dangerous to introduce such a large and disturbing topic into our prevailing politics, but the truth is that ineffective bangs, like long dresses, are an evil that has been tolerated too long. And the ladies' club of this locality that advocates short dresses and decent bangs shall have all the canceled ballots of the late canvass to use for curl-papers.—*Judge*.

A BEAUTY SECRET.

Lady Londonderry, the famous English beauty, according to *Vanity Fair*, has a peculiar system for keeping her youth which seems to have succeeded marvelously thus far. One day in every ten she lies in bed, although her health is excellent. On this day of literal rest she sleeps in the morning until she wakes naturally, then takes a hot bath, and then goes back to bed, where a light breakfast is served. After that she tries to go to sleep again, and if she does not succeed, lies quietly without even thinking in the darkened bedroom. At six o'clock she rises, slips on a peignoir, dines in her cabinet de toilette and then sits idly by the fire until ten o'clock, when she goes to bed for the night. Under no circumstances does her ladyship depart from this rule of making periodical disappearances from the social whirlpool every ten days.

Brandreth's Pills

Brandreth's Pills are the great blood purifier. They are a purgative and blood tonic, they act equally on the bowels, the kidneys, and the skin, thus cleansing the system by the natural outlet of the body—they may be called the purgative sudorific and diuretic medicine. They stimulate the blood so as to enable nature to throw off all morbid humors, and cure disease no matter by what name it may be called. One or two of them taken every night will prove an infallible remedy.

Brandreth's Pills are purely vegetable, absolutely harmless, and safe to take at any time.

Sold in every drug and medicine store, either plain or sugar coated.

YOU HAVE READ OUR OFFER TO GIVE AWAY SOAP

In every issue for several months. Many have sent for it, and many have not. Those who did and used it according to directions, have been very much pleased, as their letters testify, and they say, with one accord, that they will never go back to the old way of washing clothes.

HAVE YOU SENT FOR A PACKAGE?

If not, why not? It costs nothing. Get a back number of the paper and read our offer to send you a package of soap FREE, and make the required promises. If you have sent and are pleased with the soap, show the offer to some friends and tell them to write us the required postal card and get a trial package free.

Pub's FARM AND FIRESIDE,
SPRINGFIELD, OHIO.

Newcomb Fly-Shuttle
Rag Carpet
LOOM
Weaves 100 yards per day. Catalogue free.
C. N. NEWCOMB,
310 W. St. Davenport, Iowa.
Mention this paper.

WALL PAPERS
FREE!
The most complete set of samples and instructions how to paper sent. We have the largest and best selected stock in the U. S. It will pay you to see our samples before purchasing.
CHAS. M. N. KILLEN, 614 & 616 So. 20th St. Phila.

Asthma
The African Kola Plant, discovered in Congo, West Africa, is Nature's Sure Cure for Asthma. **Cure Guaranteed or No Pay.** Export Office, 1164 Broadway, New York. A Large Trial Case, FREE by Mail, address KOLA IMPORTING CO., 132 Vine St., Cincinnati, Ohio.

The Tendency
of the age is toward artistic effects. We are abreast of the times in our particular line—wall papers. 100 samples mailed for 8 cents. Prices 5 to 50c. a roll.
A. L. DIAMENT & CO., 1206 Market St., Phila.

FREE.
Our large 24-page Catalogue, profusely illustrated, full of information on the proper construction of Pianos and Organs. We ship on test trial, ask no cash in advance, sell on instalments, give greater value for the money than any other manufacturer. Send for this book at once to
BEETHOVEN ORGAN CO.,
WASHINGTON, N. J.
P. O. Box 628.

Our Household.

THE GIGGLEY GIRL.

Oh, the giggley girl—
Gee whiz!
From her toe to her curl
What a bother she is!
For whatever you do and whatever you say
She is laughing away through the whole of
the day;
And sometimes her noisy, unwearying zeal
Will make a man feel
So all-fired
Excessively tired
That far into space he'd be willing to hurl
The giggley, giggley, giggley girl.
Oh, the giggley girl—
Great Scott!
What a scurry and whirl
She can bring to the spot!
And yet, when her light-hearted freedom
from care
Kind of gets in the air—well, you can't be a
bear—
And you feel that your blood wouldn't stand
it to see
A man who would be
So downright
Ill-bred as to slight
Or in any way hurt, with a mood of a churl,
This giggley, giggley, giggley girl.

—Judge.

THREE ENVELOPES.

BY KATE KAUFFMAN.

WHEN something which is really tasteful costs no more than the photograph-holder which stands on a certain dainty lady's table, it deserves description. It stood like a diminutive three-panel screen, each panel of which held a beautiful photograph. When, in opposition to all the good training of my childhood, I put forth my hand to touch and examine the attractive trifle, behold, it was merely three envelopes! But you shall be told exactly how to make it.

Take three envelopes of a size, that will hold a cabinet photograph. Let the openings be round in two of them, but not just a common round cut. No; decide how large a round or oval opening you wish, and indicate it lightly with pencil marks. Now from the central point draw lines outward till they reach the limit you have set. You understand that these divisions must resemble the cuttings of a circular cake; they are to be cut, also, but not till you have painted a spray of flowers diagonally across the envelope, starting below the circle which you intend for the opening and extending above it. Nothing is prettier than forget-me-nots; they are so dainty in water-colors. When the painting is done, place a piece of pasteboard in the envelope, and with a sharp penknife cut from the center out, making each division no wider than half an inch at the outer edge. Now gild these cut edges, and when the gilt is dry, crimp up each little division. When you have done this all around the oval opening, the crimped papers will make a pretty little frame for the photograph which is to be slipped in the envelope.

In the center panel the painting was the same, but the opening was square, made by cutting from the center diagonally in both



DETAIL OF HANDKERCHIEF CORNER.

directions. The edges were gilded and crimped as in the others. The square opening is much less trouble to make.

Use baby ribbon of a delicate blue to take the place of hinges on this wee three-panel screen, and you will have a perfectly beautiful object at the cost of ten cents, if you happen to own a paint-box.

Another sweet little object is a needle-case, of which, fortunately, you can have an illustration. The original is much prized by the owner, because, besides its beauty, it demonstrates the possibility of a long life of joyous activity. It is the work of a lady who has seen three-score years and remains to appreciate all good art work and also to produce it.

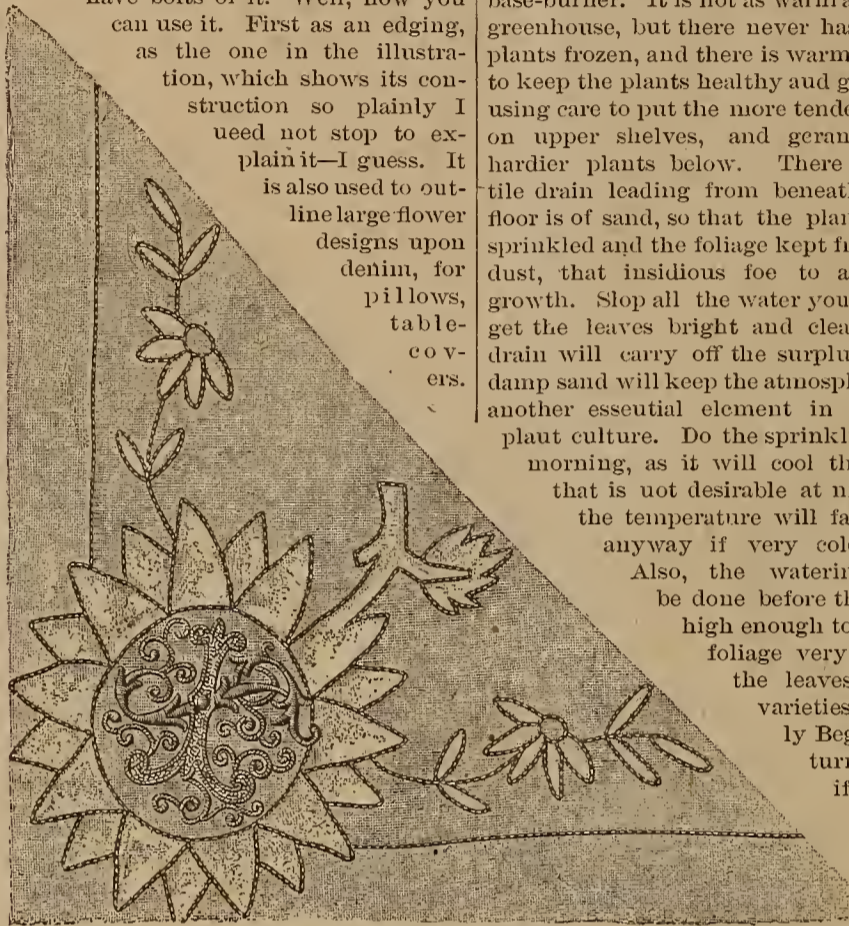
Take two pieces of cardboard two and one half inches in diameter. Paint a circular picture in the center of each, one and one half inches in diameter. Cut the little notches around the edges and wind on the

silk thread as you can see in the illustration. The coloring is very pretty in this object. On one side, the picture painted has a blue sky, with the same tint reflected in the water. The thread used on this is pale pink. On the other side, the picture is a cluster of red berries with fresh green leaves. The thread around it is delicate green. Inside, there are three round bits of exquisitely fine wool goods, pink and white, and the whole is dainty enough for the needle of a fairy.

BUSY FINGER WORK.

CHRISTIE IRVING.

For a long time there has been no use for serpentine or wave braid. Down in the depths of your box of zephyrs perhaps you have bolts of it. Well, now you can use it. First as an edging, as the one in the illustration, which shows its construction so plainly I need not stop to explain it—I guess. It is also used to outline large flower designs upon denim, for pillows, table-covers.



HANDKERCHIEF CORNER.

The possibilities of blue denim are numerous. As a decorative article it is very beautiful, making nice lounge-covers, pillows, portieres and window-curtains. It makes the prettiest of dresses for ordinary wear—the skirt bell, and an Eton jacket and vest front. For a fall school-dress it would be very serviceable. The Eton jacket can be purchased for 30 cents.

The new skirt is the cornet, which is very desirable in heavy material, and can be bought for forty cents.

THE SOILED-LINEN BAG in our illustration can be made of it, and the figure piece made of the light side placed upon the dark, and embroidered in scarlet.

HANDKERCHIEFS.—Many like to make their own, to be sure they have linen ones, and our patterns for decorating them are all simple and neat. Avoid colors in handkerchiefs; they are always prettier plain white.

SASHES.—China silk in sashes is apt to become very stringy. It can be washed in soap-bark water, starched slightly and ironed to look very nicely. Hunt up everything in scarlet for fall wear, as it seems to suit the season with its wealth of color in the autumn leaves.

Another favorite color will be green. Let me describe two very serviceable suits I saw the other day at the depot. One was of small check wool in brown and white. The skirt was a plain, untrimmed bell skirt; the waist an Eton jacket, with a vest waist of brown silk. The revers and collar to the jacket were of brown velvet. At the waist a brown velvet belt, coming only from the sides and fastened in front with a steel buckle. There was a box-plait down the silk waist in front, concealing the fastenings. With it was worn a brown chip hat trimmed with brown velvet.

The other was a very dark blue trimmed with white cashmere revers, a full front of white half way down the waist, which was a plain, pointed basque; deep white cuffs. Upon the cuffs and revers and around the neck was one row of fancy, dark blue silk trimming braid. A plain navy blue sailor trimmed with blue was the hat worn with it.

Nowhere is one seen more than when traveling, and one's prettiest dress should be donned on this occasion. It is a great mistake not to look well when traveling. If going a long journey, a white sack can be taken along, which can be worn to save the dress waist when it is very warm.

WINTER PLANTS.

The perplexing "plant question" begins to agitate the mind of the flower-lover. How many, what kind, and where shall I put them?

The latter question is perhaps the most troublesome, and happy is the wife who has a flower-loving husband to help prepare a suitable room for them. If he is only enough of a carpenter to do the work, the material for a small conservatory does not cost much, especially if you are lucky enough to get some second-hand store window-sash from some business house that is putting in new sash or plate glass. Such was our good fortune, and the plant-room cost \$21.65. It opens from the dining-room and is warmed from that stove, a hard-coal base-burner. It is not as warm as a regular greenhouse, but there never has been any plants frozen, and there is warmth enough to keep the plants healthy and growing, by using care to put the more tender varieties on upper shelves, and geraniums and hardier plants below. There is a good tile drain leading from beneath, and the floor is of sand, so that the plants may be sprinkled and the foliage kept free from all dust, that insidious foe to all healthy growth. Stop all the water you wish and get the leaves bright and clean; the tile drain will carry off the surplus, and the damp sand will keep the atmosphere moist, another essential element in successful plant culture. Do the sprinkling in the morning, as it will cool the air, and that is not desirable at night, when the temperature will fall too low anyway if very cold outside.

Also, the watering should be done before the sun gets high enough to strike the foliage very much, as the leaves to some varieties, especially Begonias, will turn brown if the sun shines so brightly on them while in a damp state.

In nearly all old-fashioned farm-houses there is a little, wee bedroom from the kitchen or dining-room. By putting in one or two more windows, would not that make a nice conservatory? You could not have the sand floor, perhaps, and would have to be more careful in watering, and do a little mopping after.

Is there not a porch at the south or east that could be inclosed and made to do nicely?

If it must be a window-garden affair, be careful to select sturdy, blooming, stocky plants that will stand dust and some neglect; and be very cautious not to crowd in too many, if you want the best results. A calla lily, well potted, a crock or two of heliotrope (the light color bloom the best in winter), an Ageratum, rose geranium (for sweet foliage), an ivy geranium and some of the flowering geraniums will give the most satisfaction. Of the last class mentioned, I think the Marvel is the finest winter bloomer I ever saw; the flowers are large, semi-double, and a rich, dark scarlet; certainly a beauty. The Apple Blossom, a single pink, is good. The Firebrand, a single, dark pink streaked with red; unusually good. You will find the single and semi-double will bloom more freely than the very double.

I want a plant for winter bloom that is a year old. Summer slips do not get started with enough branches to make much of a show the first winter. Take an older plant, cut it back to make it branch out, and you will have more flowers. Lift it from the bed in the yard as early as September, cut back some and pot in good soil, not too rich, or you will get more foliage than flowers.

Have a few crocks of foliage plants; their bright leaves of different colors are nearly as pretty as blossoms. Of these varieties, the young summer slips will do the best if you have put them down early enough to insure good roots before potting. Old Coleus are hardly worth lifting from the bed, when the slips can be secured so easily and are so much prettier. Keep the ends pinched off pretty thoroughly, if you wish a compact, bushy plant. A few bulbs of hyacinths and freesias are lovely to have, if you can find room for them.

Easter lilies are beautiful, but it takes a long time for them to get ready to bloom. They need a large crock, and do not stay in blossom long; so if one has not plenty

of room, I would give the space and care to something that will give more freely in return.

Brugmansias are free bloomers, but horrid things to breed lice and red spiders. One must fight insects all the time if trying to keep them.

Do have a jar of primroses for a north window, and a basket of Mad. Saleroi geranium. They do not want sun, but plenty of light, and some of the Begonias will do better with them in the north window, if it is warm enough and not dusty.

GYPSY.

FOR THE BUSY ONES.

CLARA SENSIBAUGH EVERTS.

A small rent or hole in cloth or other wool goods may be repaired by slightly moistening the edges on the wrong side with a little mucilage, and pasting a bit of the same goods under the torn place. If the threads run the same way the repairing can scarcely be detected. Lace or other thin goods may be repaired by dampening a piece to match in starch-water, putting on the wrong side and pressing with a hot iron.

A kid glove can be mended by turning it, drawing the edges carefully together, and fastening with a piece of court-plaster or surgeon's plaster. The latter is best, as it is stronger. That plaster which is stuck in place by warming must not be used—although often sold for court-plaster—as in that case the warmth of the hand would probably cause it to come off.

When making underwaists for the children, after the under-arm seam is sewed up, stitch over it a straight strip of muslin, thus preventing tearing crossways, and enabling one waist to outwear two made without this precaution. If four or more extra thicknesses of cloth are put on under a button before it is sewed on, and very coarse thread used in sewing, the buttons will usually hold as long as the garment lasts, if the eyes are smooth and do not cut the thread.

We used to dread window washing more than any part of the house cleaning, because in our ignorance we took the hardest way. But since learning the following way it is a pleasure, for it is so easily and quickly done, and the glass is so clear and bright. Wash quickly in strong soap-suds as hot as can be used, and wipe immediately with a soft cloth without rinsing. If they are then rubbed with soft newspaper they take on a more beautiful polish, but is not really necessary.

The dining-room carpet may be quickly and easily cleaned by dipping a cloth in gasoline and briskly rubbing the spots with it. It is far superior to washing, and does not require half the time.

When sweeping a room, if the broom be thoroughly wet, then shaken till no more water drops off, it will prevent dust from arising and many times obviate the necessity of dusting. If the carpet be very dusty, or the room large, wet the broom two or three times before the floor is completed.

One of the most valuable cook-books we ever saw was made by the owner, having been begun a year or two before her marriage and is still receiving valuable additions, although many years old. A blank book with flexible back, costing but a small sum, was procured and into this was copied all the choice recipes of her friends. Being much away from home, she obtained recipes for all new dishes she encountered.



WAVE BRAID EDGING.

Many recipes from domestic papers were clipped out and pasted in so that by the time she began housekeeping she had a good collection of tried recipes that she knew could be relied on. As the book is classified and indexed, it is easy to find anything wanted, and becomes more valuable with each succeeding year.

A disinfectant that costs very little and is perfectly odorless, is made by dissolving a heaped teaspoonful of nitrate of lead in a quart of boiling water, stirring it with a stick and then adding to it a pailful of cold water. This is odorless and will not stain; it costs about three cents, and if it is thrown once a week down the bath-tub, closet and stationary wash-bowl, it will be money well spent.

HOME TOPICS.

CODFISH WITH EGGS.—I know many people rather sneer at codfish, but a number of appetizing dishes may be made from it, nevertheless. Some of these, as scalloped codfish, codfish balls, etc., I have spoken of before, but the following I do not think I have ever given: Take half a pound of salt codfish, pick it up finely with the fingers, being careful that no little bone escapes you and goes in with the shreaded fish; cover the fish with plenty of cold water and let it stand all night. In the morning, drain off the water, put a piece of butter the size of an egg into a saucepan, and when it is melted, add a large tablespoonful of flour, stir it until it is smooth, then add a cupful of milk and the fish. Stir it until it boils up and thickens, then add a gill of cream and pour it into a buttered pie-dish. Drop one egg for each person on top, dust a little salt and pepper over the eggs and set the dish in a hot oven until the eggs are cooked, when the whole can be slipped onto a hot platter and served. The above quantity is sufficient for six persons, and will require six eggs.

TO COOK AN OLD HEN.—In your flock of hens there may be some that have grown too old to keep over another winter with profit. These hens, if in good condition, may be cooked so they will be as tender, juicy and fine flavored as young chickens.

Dress the hen as for roasting, and cook it slowly in water for about three hours; then set it off the fire, but let it stand in the broth until the next day. Take it out of the broth, rub a little butter over it, dust with flour, and roast it in the oven about an hour, basting it frequently with some of the broth in which it was boiled.

LETTERS.—What messengers of love and comfort letters may be to cheer the heart of the wanderer or one of those who stay at home and see their dear ones go, one by one, out into the world. We sometimes, in our busy life, grow careless and let weeks grow into months without taking our pens to talk with some absent dear one. Brothers and sisters who have grown up beside one fireside go out from the old home, and after a time the letters between them grow few, and they gradually grow apart. This ought not to be so. Nobody wants it to be so, and only carelessness and the pressure of other duties causes it. Sometimes even the dear mother and father, left in the old home, are made to wait lovingly, longingly for the messages of remembrance. Although they may not complain of their disappointment, and be always ready to invent excuses for your remissness, yet the dear hearts are wounded by it. By and by there will be no father and mother left in the old home. Send them tender, loving



SOILED-LINEN BAG.

letters while you may. Tell them all about your new homes, your hopes and plans for the future, as you used to do when a little child, and be sure you will never find more sympathetic, interested listeners, and their loneliness in the quiet house which was once so merry with child life will be lessened and their lives cheered by these loving messages.

MAIDA McL.

There is nothing better for nervousness than celery tea, the tops, roots or even the seed, and, in draining the water from cooked celery the best part is lost.

BILL OF FARE FOR AN AUTUMN BREAKFAST.

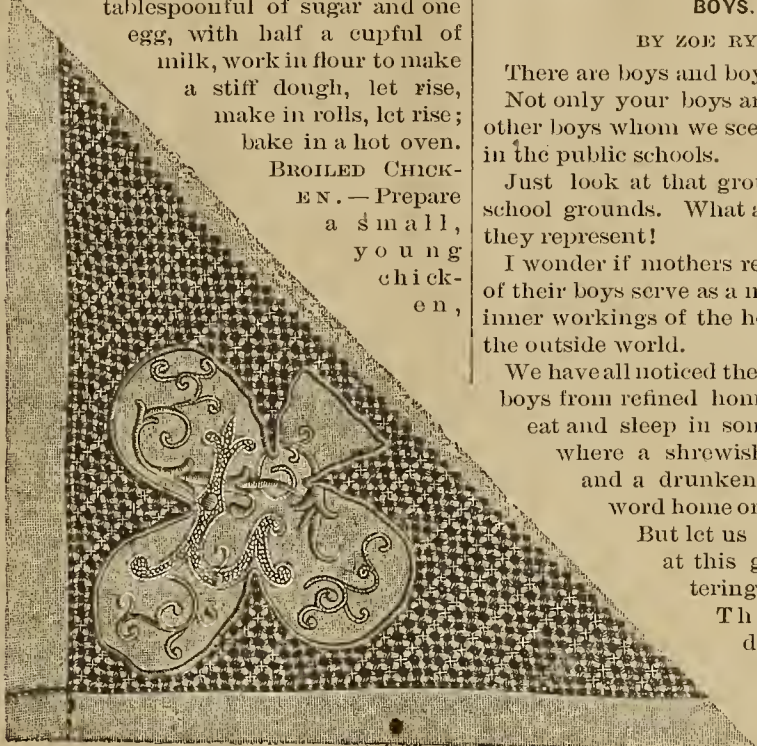
BY ELIZA R. PARKER.

A breakfast party is a very enjoyable mode of entertaining one's guests in the country, and the following bill of fare will be found dainty and appetizing:

Breakfast Rolls.	Broiled Chicken.
Graham Bread.	Creamed Sweetbreads.
Sliced Tomatoes.	Fried Potatoes.
	Frozen Chocolate.
Coffee.	Tea.

BREAKFAST ROLLS.—Take a pint of bread dough, add two tablespoonfuls of butter, a tablespoonful of sugar and one egg, with half a cupful of milk, work in flour to make a stiff dough, let rise, make in rolls, let rise; bake in a hot oven.

BROILED CHICKEN.—Prepare a small, young chicken,



HANDKERCHIEF CORNER.

split down the back, flatten the breast-bone, put the gridiron over a clear fire, rub with clarified butter and place the chicken on it; turn often to prevent scorching. When done, sprinkle with salt and pepper, put on a heated dish, and pour over melted butter. Serve with mushroom or tomato sauce.

CREAMED SWEETBREADS.—Parboil a pair of sweetbreads, pick them to pieces, and chop fine, with half a dozen mushrooms. Put a tablespoonful of butter in a frying-pan; when melted, add a tablespoonful of flour, mix smooth, thin with half a pint of milk; add the sweetbreads and mushrooms, stir over the fire five minutes, season with salt and pepper. Serve in little paper cases.

FRIED POTATOES.—Pare and slice thin four large potatoes. Have a frying-pan of boiling lard, drop the potatoes in, and brown; take up, drain on paper and sprinkle with salt.

FROZEN CHOCOLATE.—Put four ounces of chocolate in a chocolate-pot, and set over the fire to melt; add a quart of new milk and two tablespoonfuls of sugar, let boil five minutes, add a pint of whipped cream sweetened. Pour in a freezer and freeze.

HELPFUL HINTS.

BY ZOE RYMAN.

To keep cheese from molding, cover it with a piece of cotton or linen cloth saturated with strong vinegar. It will keep as fresh as when first cut and no flies or insects will touch it.

To cut warm bread, warm the bread-knife and the slices will be smooth and nice.

Crisp crackers in the oven before using unless they are freshly made.

To keep black ants away, sprinkle black pepper where they come, or draw a chalk mark across their runways.

When peeling onions, keep your hands and the onions under water and you need not weep or find your hands scented with the onions.

To keep bread or cake from burning, put a small dish of water in the oven.

To clean a tea or coffee pot that has become discolored from using, put into it a teaspoonful of saleratus and fill two thirds full of water. Let boil two hours. Wash and rinse well before using.

To clean lamp-chimneys, hold them over the steam from the tea-kettle, then rub with a soft cloth and polish with paper.

To clean brass, dissolve a teaspoonful of salt in the same quantity of vinegar. Apply it with a rag, rub well, then rinse and wipe.

In dusting furniture, use soft cloths which have been sprinkled and rolled tightly the night before.

To remove ink stains from linen, rub the soiled parts with clean tallow, then wash and boil as usual.

Peach stains may be removed by putting the article in boiling water before washing it.

To prevent buff or gray linen spotting when washed, stir into the first water one tablespoonful of black pepper. This will also keep the color in cambrics from running.

To remove rust from flat-irons, rub with beeswax tied in a piece of flannel, then rub the irons on fine salt.

To keep oil-cloth bright, wash in skim-milk.

To clean black silk, brush it well to free it from dust; then sponge it with alcohol and water, and press on the wrong side with an iron only warm.

BOYS.

BY ZOE RYMAN.

There are boys and boys.

Not only your boys and mine, but those other boys whom we see on the streets and in the public schools.

Just look at that group of boys in the school grounds. What a variety of homes they represent!

I wonder if mothers realize that the lives of their boys serve as a mirror to reflect the inner workings of the home to the eyes of the outside world.

We have all noticed the difference between boys from refined homes and those who eat and sleep in some miserable place where a shrewish, untidy mother and a drunken father make the word home only a mockery.

But let us look more closely at this group of boys entering the school ground.

They are all well dressed and come from homes made comfortable by plenty of this world's goods.

Why, then, is

there such a marked difference between the two?

Here are a few of the pleasant, straightforward boys who reflect the light of a Christian home where the mother is a gentle woman and the father a manly man.

Then comes the boy who thinks himself a little better than his companions, and shows plainly that in his home respectability is measured by the size of the bank account.

Here, also, is the ill-natured boy, trying to gain every advantage for himself and never yielding to others, and the reflection shows us a home where selfishness and rudeness are but thinly covered by the cloak of company manners, which is assumed as occasion demands.

Last but not least is one who is more of a study than the others; he has a quiet, almost shy manner, as if accustomed to being repulsed or ignored, but answers politely and with a pleased look when we make an opportunity to address him. He does not so readily reflect the home picture, but after noting the appreciation in his face as we discuss the games, lessons and other things interesting to boys, we conclude that he is one of those unfortunate boys who find no sympathy at home. Perhaps the mother's time is too much taken up with the demands of society, or she thinks, with her young lady daughters, that boys are a trouble, and the father engrossed in business does not realize that his boy is old enough to need his companionship. Oh, mothers, is this right? Why do you not give to your boy the same love and sympathy which your girl receives?

I am glad to know that this class of boys is small in comparison with those who are loved and appreciated, and yet how my heart goes out to those boys who will never know the meaning of true mother love.

Mothers, be very careful of your boys; take them into your confidence and trust them, thereby winning their confidence. This is the first step by which you may lead them to the pure life which we all wish our sons to live, and which is better expressed by the separated adjective—gentle, manly men.

ASTHMATIC TROUBLES, Pleurisy Pains, and Inflamed Throats, are overcome and healed by Dr. D. Jayne's Expectorant—for fifty years an approved stand-by for all Coughs and Colds.

A BACHELOR'S GROWL.

Oh, the beautiful women, the women of ancient days,
The ripe and the red, who are done and dead,
With never a word of praise;
The rich, round Sallies and Susans, the Polties
and Joans and Prues,
Who guarded their fame and saw no shame
In walking in low-heeled shoes.

They never shrieked on a platform; they never
desired a vote;
They sat in a row and liked things slow
While they knitted or patched a coat.
They lived with nothing of Latin, and a jolly
sight less of Greek,
And made up their books and changed their
cooks
On an average once a week.

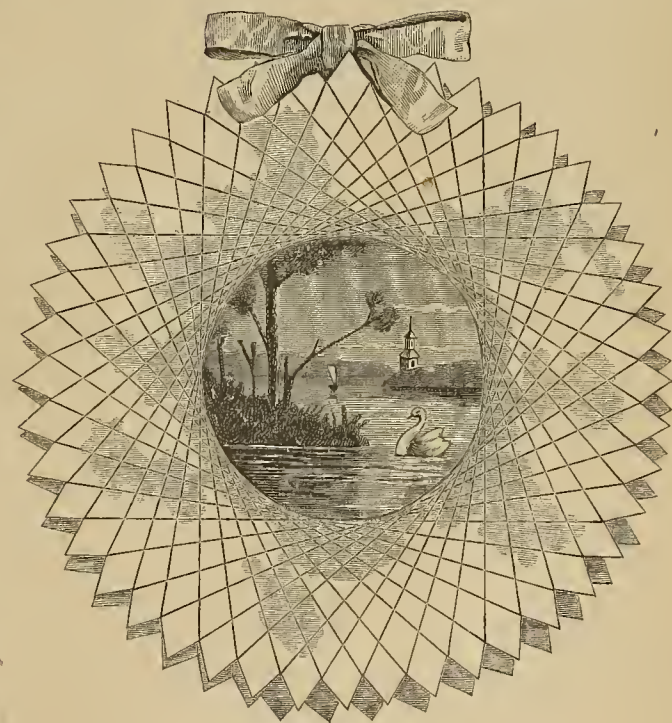
They never ventured in hansoms, nor climbed
to the topmost 'bus,
Nor talked with a twang in the latest slang;
They left these fashions to us.
But, ah, she was sweet and pleasant, though
possibly not well read,
The excellent wife, who cheered your life,
And vanished at ten to bed.

And it's oh, the pity, the pity that time should
ever annul
The wearer of skirts who mended shirts,
And never thought nurseries dull.
For everything's topsy turvy now, the men
are bedded at ten,
While the women sit up and smoke and sup
In the club of the Chickless Hen.

—Punch.

THE REVIVAL OF CHINA.

There are few pleasanter ways of spending an hour than in one of our large china and glass shops. Judging by what is to be seen, there is a decided revival of china as an ornament and a convenience for our writing-tables. The inkstands, standishes, as our grandmother called them, of dainty modern Sevres, and even daintier English china, with candlesticks, pen-trays, etc., to watch; toilet sets of all kinds of quaint shapes and delicate coloring; exquisite bottles and vases of wonderful gold china, set thick with pearls of the fashionable turquoise; wee doll's house furniture in soft blue, white and gold, suggestive of the funny little folk who look down at us from the portraits of Van Dyk and Velasquez; "sulky" sets of teacup, with a lid, sugar-basin and cream-jug in a shell-like tray, which forms also a diminutive bread and butter plate—just the very thing for the demoralizing cup of tea we all disclaim, and yet delight so much to find by our bedside when we wake of a morning. More utilitarian, though not a bit less beautiful, are the dinner and dessert sets, while the beautifully shaped and colored toilet sets would



NEEDLE CASE.

be a joy in any room. A quaint set was in an olive-green pottery of a comfortable, roomy shape, that would make the veriest school-boy desire to wash, though never so disinclined for ablutions in a general way.

—Decorator and Furnisher.

DON'T TOBACCO SPIT YOUR LIFE AWAY

Is the startling, truthful title of a little book just received, telling all about *Notobae*, the wonderful, harmless, economical, guaranteed cure for the tobacco habit in every form. Tobacco users who want to quit and can't, by mentioning FARM AND FIRESIDE can get the book mailed free. Address THE STERLING REMEDY CO., Box 763, Indiana Mineral Springs, Ind.

Every woman who has not done so already, should send for the free trial package of Frank Siddall's soap, (see page 9), and try this new way of doing the washing. You will never go back to the old way.

Our Sunday Afternoon.

ONWARD.

BY ANNIE WALL.

Is there a place that thou wouldst win?
Strive earnestly to win it.
No race is won till first begun;
Do thou at once begin it.
Do trials and discouragements
Frown thickly down upon thee?
They will but make success more dear
When it at length shall crown thee.

If thy purpose be but noble,
Struggle on, nor harbor doubt.
Twice or thrice, though failure meet thee,
Face thee quickly right about.
Form some other plan of action,
Try another place to scale
Those strong walls; don't let them daunt thee.
Steadfast effort cannot fail.

Honest, earnest, bold endeavor,
Rightly used, is never lost.
Though it win its purpose never,
Do not thou begrudge the cost.
For a soul that struggles upward
Through great weariness and pain,
Grows in strength and noble import;
Call not, then, such labor vain.

Truth is mightier than error;
Truth lives on, while error dies,
And the soul that still strives onward
Is the soul that wins the prize.
Worldly wisdom may deny it;
Let the world applaud its lie.
Think and live thy truth, and surely,
Thou shalt conquer by and by.
Pueblo, Col.

AN OLD LEGEND.

ONCE, long ago, when the world was young, and men turned to the gods for the gifts they craved—once, so the story goes, there lived a man and woman bound to each other by an exceeding great love. Neither ministered unto the other, for the light and beauty each bore within filled them with such glory and strength that their days were an unfolding, nor needed succor from outside things. But so great was their love, so the legend runs, that as time went on they felt within them the throb of a great desire to be yet more each unto the other than they had been. "Our joy consumes us," cried they. "We must work or we perish. Give us, ye gods, that thing to do for the other which neither can do for himself. Give us to do what the gods have done, and so may love find its perfect way."

Long the gods pondered. "Naught have we withheld," spake they, "save one gift only. Shall Care dwell among men, and they be even as we?" Then Care herself spoke: "Detain me not, oh, mighty ones; there is much for the men of earth to know that is hidden from them till I go." Then the oldest god remembered what in heaven had been forgot, and he rose and took the hand of Care and led her downward to the earth. And the man and woman looking at her saw a beauteous maiden, full of glee, and her eyes were as if you looked at the stars at night over gardens full of perfume. And they shone with a light of great gladness. And the faces of the man and woman lit up with an overwhelming joy. Then the oldest of the gods, so says the legend, stood majestic and held his hand aloft. "Children of the earth, unto you is given the divinest of our gifts, a being formed out of love that seeks no end of its own. You may make of her what you will. Love most your own—" But the man and woman were lost with joyous Care among the flowers; nor heeded longer the voice of the oldest god.

After many days, so the legend runs, when men multiplied, and each man's need had grown greater to him than that of any other, and each man's power the greatest end worth striving for, then it was that some man stopped and looked at Care, and looking, turned away and ran. For Care had grown gaunt-eyed and hideous, and clutched at him with long and bony fingers. And a woman, too, in those days, stopped and looked at Care, and cried out in shuddering sobs. And one tried to drown her in the cup, and the other meekly bore her to her grave. Then the oldest of the gods trembled for the children of earth, seeing how a gift had well nigh destroyed them.

But there were those, even in those days, so the story runs, to whom Care was beauteous as of old. They were those with whom Love had not died, to whom life meant help for others, and opportunity for service was counted blessed. And these walked hand in hand with Care rejoicing, and they looked into her face with thanksgiving, and saw that it yet glowed with a

light of a great glory within, and that about her feet shone the radiance of perfect peace. And the oldest of the gods walking among these was glad, and unto the children of earth spake once again: "Take the hand of Care and be thankful. Look into her face, and she is a handmaid from heaven. Shun her, and she is an ogress haunting all your days."

And the oldest of the gods departed from this earth, nor was seen again among men. And so the legend ends.

But Care still walks abroad, and will walk, men say, till all men love their duty and their fellow-men, and so love her; till men know her as a great privilege, and not as their own favored creation, stalking hungry-eyed among their possessions. And women in those days will cease to shudder at Care, even before they see the faces of their little ones, nor think Care has marked their foreheads, or stooped and stolen romance out of their lives, or crept away with their ambitions. And Care will not be a lean and crouching figure huddling by firesides, but the joyous, beautiful woman who leads us with radiant smile ever to higher planes of happiness. And this must ever be true, for the saddest of life is not found where Care is, but there where Love is and Care is denied.—*Harper's Bazar*.

A LITTLE WHILE.

Jesus told his disciples that he would be with them but "a little while" longer. They were gathered in that guest-chamber where was celebrated the first Lord's supper. Judas had gone out to complete his arrangements for betraying Christ. Seeing that the end was near, Jesus told the eleven that only a little while would be with them. How much, indeed, there is clustering around that brief sentence.

Life on earth is but a little while. Even he who lives to see four-score years is here but a little while. The sands of life run swiftly away, and the enfeebled condition of old age is soon reached. Then we have but a little while to form character; a little while in which to repent; a little while in which to serve God.

Earth and everything belonging to it have a limit. A little while, and the heavens shall roll up as a scroll, and the elements melt with a fervent heat. A little while, and God's fair, sinless, new creation will take the place of this old earth, which has been, and is, cursed by sin. A little while, and Jesus himself will come to raise the dead, and gather his people to himself. A little while, and humanity shall be gathered before the great white throne of final and irreversible judgment.

Nothing is at a standstill. Everything is moving swiftly, though silently, on toward the accomplishment of God's eternal purposes. A little while, and earth will end, and he that shall come, will come, and will not tarry. A little while, and the saints of God will reign with Christ. Hasten, hasten, happy day.—*Messiah's Herald*.

A BOY'S RELIGION.

If a boy is a lover of Jesus, he can't be a church officer or a preacher, but he can be a godly boy, in a boy's way and in a boy's place. He ought not to be too solemn nor too quiet for a boy. He need not cease to be a boy because he is a Christian. He ought to play like a real boy. But in all he ought to show the spirit of Christ, and be free from vulgarity or profanity. He ought to despise tobacco and intoxicating drinks. He ought to be peaceable, gentle, merciful and generous. He ought to discourage fighting. He ought to refuse to be a party to mischief, to persecution, to deceit. He need not always be interrupting a game to say that he is a Christian; but he ought not to be ashamed to say that he refuses to do something because it is wrong or wicked, or because he fears God, or is a Christian. He ought to take no part in the ridicule of sacred things, but meet the ridicule of others with a bold statement that for the things of God he feels the deepest reverence.—*Royal Road*.

WANTING AND GETTING.

It has been said that the reason so few people get what they want in this world is that they do not want it hard enough. There is profound truth at the bottom of this odd conceit. Earnest striving and perseverance are rare qualities. A little struggle, and then a falling off; a few faint efforts, and then despair—this is the usual story of attempts to "get anything," whether it be a physical, mental or spiritual good. But to long for a thing so strongly that for the sake of its attainment one can conquer obstacles, live down opposition, ignore discouragement, and work persist-

ently and through years of trial and obscurity toward the fulfillment of a hope—is not this the record of all grand achievements and the history of all purposeful lives?

Many more wishes might be realized if people were willing to pay this price for them. Anything worth having in this world is dear, including experience. Genius itself has been defined as only unlimited patience, or an endless capacity for hard work.

It was told of some celebrated general that he never knew when he was defeated. By and by he could not be defeated. A little of the same spirit infused into ordinary life work would make many a dream possible that now seems to the wistful dreamer as extravagant as the cloudiest castle in Spain.

HOW TO PUNISH CHILDREN.

Punishment, like reward, must be adapted to the feelings and pleasures of the child, and therefore, few absolute rules can be laid down for its regulation. For bold-spirited children, restraint in a closet may be useful; but with a timid child, it will be hurtful. A child who likes eating may be punished through its stomach; one who is anxious to possess may be denied the object of its wishes; one who is selfish and quarrelsome may be obliged to play alone, and not permitted the advantages of uniting with the companions to whom it has behaved ill.

But whatever the kind of punishment, it must be administered as an act of justice and necessity, not as the effects of revenge or anger. If this be not attended to, the child believes itself punished because its nurse or mother is cross, not because they have found it necessary to restrain the evil disposition of the child.

The incessant scoldings and upbraidings usually heard among persons who, from ignorance or disinclination, are unfit to bring up children, are very injurious. The little children may hear the everlasting phrases, "Do not do so!" "Let that alone!" "Be quiet!" "Do not make such a noise!" "How tiresome you are!" "I never saw such a child in my life!" "I'll tell your mamma!" but they soon cease to regard them, and by such a means the habit of disobedience is early taught and confirmed.

THE BOOK WILL TELL.

A real Christian will be a true lover of the Bible. There is scarcely a better test. If the novel or the newspaper take the place of the Bible on his table or in his mind, then it is clear that the world has taken the place of God in his heart. If a man's Bible be clean and bright, and unsullied by use, undefiled by contact with daily life, his soul is not. There is no better spiritual barometer to test the true condition of the soul's atmosphere. He to whom the Bible seems wearisome, monotonous, uninteresting, has good cause for alarm. The neglect of it springs from coldness of affection towards its author, and dislike of his rebukes. Whoever wants to grow in grace simply must study the Bible. It is the way to gain stability of doctrine, so as not to be carried about with every wind of opinion. It is the way to commune with the noblest spirits that ever lived and be stimulated by their example. It is the way to become familiar with the loftiest precepts, receive the truest counsels, and come under the power of the holiest motives. Only he who studies the word can be strong.—*Christian Standard*.

THE NIGHT FOR SLEEP.

Martin Luther, whose combats with a personal Satan are matters of history, sometimes found his arch enemy disturbing him at night, doubtless because he knew that a mind and body unrefreshed by sleep were an easy prey for his devices during the work and care of the next day.

But in this, as in other experiences, Luther had no idea of allowing his subtle foe to get the best of him; and his rejoinder was sometimes in this style, "Devil, I must sleep now. It is God's command that we work by day and sleep by night."

It was a shot well selected and well fired. For Satan has a wholesome fear of a conflict where his opponent is resolute and trustful enough to fall back on God's thought in the matter.

The night hours have always been a favorite time for thrusting disturbing thoughts and fears and doubts into the mind. And it would be a happy habit if in all such cases one was to refuse to listen to the suggestion, and instead, insist with Luther on God's will for sleep.

If you are Bilious, take BEECHAN'S PILLS.

TALKS TO CHILDREN ABOUT JESUS. One of the most popular books ever published. Tells at sight. Credit given. Freight paid. Best book for the Holidays. AGENTS WANTED also for other books and Bibles. R. H. Woodward & Co., Baltimore, Md.

PATENTS FRANKLIN H. BOUGH, Washington D. C. No attorney's fee until patent is obtained. Write for Inventor's Guide.

PORTRAITS PICTURE FRAMES
Lowest Prices. Outfit FREE. Good Salary
Write to-day and secure general agency.
Catlg. FREE. ROBT. JOHNS, Mfr.
Dept. 13, 51 & 53 S. May St., Chicago

The High Speed Family Knitter

Will knit a stocking heel and toe in ten minutes. Will knit everything required in the household from homespun or factory, wool or cotton yarns. The most practical knitter on the market. A child can operate it. Strong, Durable, Simple, Rapid. Satisfaction guaranteed or no pay. Agents wanted. For particulars and sample work, address, J. E. GEARHART, Clearfield, Pa.

What Agents say of Tokology, a complete Ladies' Guide in health and disease. "I love TOKOLOGY and am delighted to be in its service. I can sell just as well in territory that has been canvassed." "At least 5 out of every 6 have subscribed." "Worked 10 days and have 61 orders." Prepaid, \$2.75. Sample pages free. Best terms to agents. Alice B. Stockham & Co., 277 Madison St., Chicago.

\$1.98 FREE
No Money Required.
Cut this out and send it with your order, and we will send this watch by express for your examination; after you examine it and find it as represented, pay the express agent \$1.98 and express charges and it is yours, otherwise you pay nothing and it will be returned at our expense. This is positively the first Genuine watch ever offered on the face of the earth at this price, and we warrant it a perfect time-keeper. With each watch we send our mammoth catalogue, also a printed guarantee which gives you the privilege of returning the watch at any time within one year if it does not give satisfaction. Add's




THE NATIONAL MFG AND IMPORTING CO.,
334 Dearborn St., Chicago, Ill.
Mention Farm and Fireside.

BROWN'S FRENCH DRESSING
—FOR—
LADIES' SHOES.



SOLD EVERYWHERE.
B. F. BROWN & CO.,
Boston, U.S.A., Mfrs.
Mention this paper.

HORNELL Cancer is Curable
Without the knife, still harsher caustics, or poisons. The Sanitarium treatment very successful even in extreme cases. No poulticing, no running sore. Removes every cancerous cell. For all information address
J. D. MITCHELL, M. D., Hornellsville, N. Y.



ONLY \$4.95 PREPAID HILL HE PAYS THE EXPRESS 14K Gold Plated Hunting Case Watch
Stem Wind and Stem Set. ONE YEAR TRIAL FREE. The case is hunting style, double case and double plated, superbly engraved and decorated and fitted completely with our richly jeweled and celebrated movement guaranteed a perfect time keeper. Cut this out, send it to us and we will send watch by express for your inspection. If after examination you are convinced that it is a bargain pay the agent \$4.95. We pay all charges. We guarantee this watch to stand the test and we also send a printed agreement giving you the privilege of returning the watch at any time within ONE YEAR if it does not give perfect satisfaction. All we ask is a trial. W. HILL & CO. Wholesale Jewellers, 207 State St., CHICAGO



Our Farm.

THE POULTRY YARD.

Conducted by P. H. Jacobs, Hammondon, New Jersey.

THE POULTRY AT FAIRS.

As the fall fairs will soon begin, it is not improper to call attention to the fact that the poultry department is one of the most attractive, being visited by men, women and children, and as a large number of those living in the suburbs of cities are interested in poultry, it is always an advantage to have a large display. It has been the rule to place fowls, rabbits, pigeons and pets of all kinds in the same building, a method that does not show that recognition of the poultry industry that it deserves, for the pure-bred fowls are not pets, any more than are cattle, as they represent a special class of stock.

While desiring to encourage high premiums on all crops, and especially to selected specimens of fruits and vegetables, yet the offer of \$5 for the best head of cabbage or the best bushel of potatoes, and \$2 for the best pair of fowls, is not very encouraging to the breeders of pure-bred poultry, as the cabbage may be easily boxed and shipped to the fair at a small cost for expressage, while the breeder of pure-bred fowls must provide an attractive coop and also pay double express rates, the expenses of reaching the fairs sometimes being greater for a single pair of pure-bred fowls than the value of the premium offered, which must be won under competition. It is more troublesome to ship live stock of any kind than to ship specimens of produce, and the express rates are always "double rates for fancy fowls."

A consideration of the facts by fair managers will show that the breeders of poultry cannot afford to exhibit at some fairs, owing to the expense being greater than the awards, and any encouragement given the poultry department will no doubt lead to satisfactory results, not only to the exhibitors, but also to the fair managers, as the public will appreciate large displays.

MATING FOR HARDINESS.

When mating the fowls, select hens with strong shanks, broad breast and deep in the body. The male may be finer in bone, as it is desirable that he be active. The hens should be the hardiest of the flock, as many of the diseases that attack fowls during the winter are often due to some sick and weakly hen, such as the roup, which spreads in the flock, causing a loss of time in the effort to cure the hens, as well as a falling off of eggs. Hens are intended to lay, and especially when well cared for, but care and labor may easily be thrown away on a flock that has no vigor or stamina. Diseases may be transmitted to the offspring by the parents, and it is important that the hens which are intended for producing next year's stock should be carefully selected. Only personal observation will enable one to select the best, and for that reason every member of the flock should be studied, in order to learn all the personal characteristics.

KEEPING FOOD BEFORE FOWLS.

To put food in a trough and then place the trough where the hens can have free access to the contents, is an inducement to idleness and also detrimental to success, for the reason that it is better for the hens to be compelled to work and scratch. When a feed-trough is used, some of the hens will eat more than their allowance, and become excessively fat. Experience shows that the best laying hens are the ones that are the most active, and the keeping of food before them will ruin the best flock that can be raised. It is well enough to use a trough when soft food is being given, but the trough should be cleaned out as soon as the hens have finished their meal. If the hens are laying, it will do no harm to have a small box filled with ground bone where they can help themselves, as the bone will serve as grit and will not cause them to become overfat, as they will not eat too much; but all grains should be scattered.

HATCHING BROILERS.

There is sometimes a demand for broilers about Christmas, and the time to begin hatching them is in October. Hens cannot be depended upon for incubation; hence, those who make a business of hatching chicks at this season use incubators. The chicks do not pay, however, unless you can

hatch and raise a large number, as they require the whole time of some one to attend to them. Although the market prices about Christmas time are usually low for hens and adult stock of all kinds, yet there is a sale for chicks weighing not over a pound and a half each, the prices ranging from twenty to thirty cents a pound for dressed stock, according to the demand.

THE CROSSES FOR EARLY CHICKS.

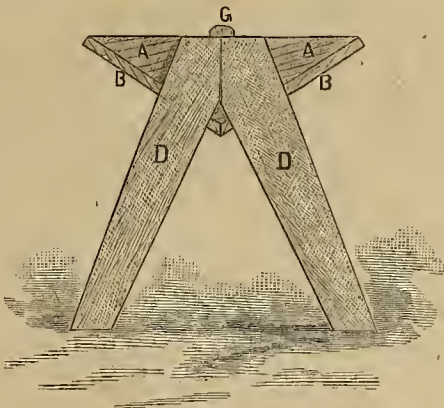
Those who wish early hatches should decide now which cross to use. It is best to decide on what is to be produced, and then breed for what you want. One cannot expect to produce a good laying strain by crossing, and at the same time produce superior birds for market, as the best laying breeds are not those that fatten very readily. The tried and popular Plymouth Rock, with its yellow skin and legs, is always a standard breed, and if the males are used for crossing on any kind of large hens, choice market chicks will be the result.

KEEPING THE POULTRY-HOUSE CLEAN.

There is no necessity for so much scraping and hard work as is often bestowed on the poultry-house. The easiest way is to thoroughly clean the house; then keep it clean with a broom. This is done by sprinkling the floor an inch deep with dry earth; or chaff, plaster or sifted coal ashes may be used. The dry earth absorbs all moisture, prevents the droppings from adhering to the floor, renders the interior of the house more comfortable for the hens, is obnoxious to lice, and enables the work of cleaning to be done in a few minutes.

PERCH AND DROPPINGS-BOARD.

We give an end view only because it is made plain. A A is an end-piece of two-inch board, 20 inches long and 6 inches wide. B B are the bottom boards, 1 inch thick and 12 inches wide; they are 6 feet long, but may be of any length. D D are the legs, 22 inches long, and G the perch.



PERCH AND DROPPINGS-BOARD.

When in position, the top of the droppings-board is open like a trough, as A A is only an end-piece, B B running the whole length. The droppings are removed with a hand-shovel, or through an opening placed anywhere in the bottom. The nests can be placed under this board as well as under a broad, flat board.

FALSE ECONOMY.

The attempt to keep thirty or more hens in a poultry-house that is adaptable for only twenty results in fewer eggs from the thirty hens than if a smaller number occupied the space. Cases are numerous where a few hens lay well, while large flocks gave no returns. The hens must be comfortable or they will not thrive, and during the warm season there is no surer method of ceasing egg production than to have too many hens together. There is no economy in crowding them, for what is gained in one direction is lost in another.

SCABBY LEGS IN SUMMER.

The scale, or scab, on the legs of the fowls is composed of deposits by very minute parasites, which cannot be seen with the unaided eye, and gradually the deposit is made until the legs are obstructed with a heavy, thick, rough covering. The remedy is to dip the shanks of the legs in crude petroleum once a week for a month, or anoint with a mixture of one part kerosene and three parts lard.

SOFT FOODS.

Hard food should always be the rule, but such foods as middlings or ship stuff must be fed in a moist condition. It makes a very sticky dough, and for that reason the middlings should be mixed with bran and corn-meal, equal parts, and should be fed only once a day. All such food as cooked meat or potatoes may also be added at the same time.

BANTAMS.

A great many persons prefer to hatch Bantams late in the year, as they claim that late hatching is detrimental to growth, and the Bantams are thus made smaller. The smaller the Bantam the more valuable it is. Bantams are profitable, because they can be kept on a small space, and they lay larger eggs than any other breed in proportion to size and cost of food.

NON-SITTERS.

All breeds have their merits, and some are preferred because they are known as non-sitters. There are really no non-sitters. The hens of any breed will sit if they are very highly fed and made fat. The reason that some do not sit is because they are very active, and keep themselves in proper condition for laying by exercise.

SOUR MILK.

On some farms milk is plentiful, and especially skim-milk or buttermilk, which may be given the hens daily, all that they desire, or the hens will use curds. There is nothing better than milk or buttermilk for moistening the soft food.

CORRESPONDENCE.

DOUGLASS MIXTURE.—I use the Douglass mixture once in a while with chickens, and have good results. If they appear sick and the droppings look suspicious, I put a very little in their drinking-water for a week or two, and they get better at once. MRS. F. O. Clyde, Mich.

GAPES IN CHICKS.—I see frequent inquiries for a remedy for gapes in chickens, and I will say that the man or woman who will put a straw or feather or horse-hair down the windpipe of a chicken to remove the worms ought to have one put down their own throat, and see how they would relish such harshness. So simple a remedy as camphor will cure them. If those that have chicks troubled with the gapes will take gum camphor, and as soon as they see or hear any of their chicks sneeze, give every chick in the flock a piece the size of a kernel of wheat, then wait a day or two and repeat, I don't think they will see any more gapes, and if they should, repeat again. We have used camphor for fifteen years, and have not lost a chick with the gapes in that time, so that I am positive it will cure very bad cases if persevered in. That is the only disease we are ever troubled with among our fowls, and we always keep from sixty to one hundred every winter. We raise a good many chicks in summer with the brooder, hatched by hens. I would like, should any one try this, for them to report the result through FARM AND FIRESIDE. A. H. Amsterdam, N. Y.

INQUIRIES.

Room for a Flock.—L. M. P., Chattanooga, Tenn., writes: "I wish to keep five breeds, and have five hundred square feet to each yard. How many fowls can I keep in a yard of that size?"

REPLY:—Ten hens should have at least 1,000 square feet of yard space. If you use exchangeable yards, five hundred square feet for each yard will answer if the fowls also have a run on the range for an hour or two each day.

Canker.—Mrs. W. M., Newton, Illinois, writes: "My fowls breathe with difficulty, and the mouths and throats are very sore, with a slimy matter covering the throats, and patches also on the throats. They are very weak, and some fall over and die."

REPLY:—The disease is probably canker or a form of roup, due to inherited debility and aggravated by exposure. Give ten drops daily of a mixture of one part spirits of turpentine and three parts sweet-oil. At night give a pinch of chlorate of potash.

Lice.—G. A. F., Columbus, Indiana, writes: "We have a lot of chicks that eat with good appetite and grow fast, but now and then we notice one moping and sleepy. In a few hours it dies."

REPLY:—The difficulty is due to the large gray lice on the skin of the heads and necks. Anoint their heads with a few drops of sweet-oil or melted lard.

Constipation.—Mrs. A. T., Kingsville, Mo., writes: "I have a cock and hen afflicted with what I call the piles. Their bodies seem to drop to the ground and their bowels appear to have no action."

REPLY:—Probably caused by an exclusive diet of grain or dry food. Give only green food for a few weeks. Once a day give each a tablespoonful of linseed-meal for two or three days, and then reduce to a teaspoonful, which may be continued until they are in proper condition.

HOME STUDY. A thorough and practical given by Mail at Student's Home, by an old reliable school. No experiment. 7 Years' Success. Low rates and perfect satisfaction. All ages and both sexes taught. It will pay to investigate. Write for Catalogue and free trial lesson. Bryant & Stratton, 449 Main St., Buffalo, N. Y.

A ROAD WAGON

\$32.00 FREE. To introduce our goods, we will give one of these elegant Road wagons to any one who will sell Six (6) for us. Regular price is \$65.00, we sell it for cash with order for \$32. If you are looking for a bargain in Vehicles or Harness send for our free catalogue. FOSTER BUGGY & CART CO., 23 Pike Bld. Cincinnati, O. Mention this paper when you write.

CHASE'S 3 HORSE HEAD



HORSE BLANKETS

are the STRONGEST made.

CHASE'S PLUSH ROBES are the standard. Plush will not shed.

LOOK FOR NAME CHASE IN BINDING OR ON TAB IN ONE CORNER.

Mention this paper when you write.

BEST INCUBATORS and BROODERS

for hatching and raising Chicks ever invented. Brooders only \$5. Catalogue. Geo. S. Singer, Cardington, Ohio.

OVER 60 RELIABLE HATCHERS at Decatur, Ill., alone. Hundreds of testimonials. NO BETTER incubator made. Send 4c. for illustrated catalogue. Reliable Incubator & Brooder Co., Quincy, Ill.

Mention this paper when you write.

ALL GOODS ON TRIAL ON EASY CONDITIONS. CATALOGUES FREE. Write at once to HOLLY WATCH CO., Jersey City, N. J.

DOUBLE Breech-Loader \$7.50. RIFLES \$2.00. WATCHES. BICYCLES \$15. All kinds cheaper than elsewhere. Before you buy, send stamp for catalogue to THE POWELL & CLEMENT CO., 166 Main St., Cincinnati, O.

MY WIFE SAYS SHE CANNOT SEE HOW YOU DO IT FOR THE MONEY. \$12 Buys a \$65.00 Improved Oxford Singer Sewing Machine; perfect working, reliable, finely finished, adapted to light and heavy work, with a complete set of the latest improved attachments FREE. Each machine is guaranteed for 5 years. Buy direct from our factory, and save dealers and agents profit. Send for FREE CATALOGUE. Mention paper. OXFORD MFG. CO., Dept. 24, CHICAGO, ILL.

SYLPH CYCLES RUN EASY. Vibration overcome without complication, loss of power or ungainly features. Highest grade in material, construction and finish. All users delighted. Investigate. Agts. wanted. Cata. free. ROUSE-DURYEA CYCLE CO., 32 E. St., Peoria, Ill.

Mention this paper when you write.

ILLUSTRATED LORD'S PRAYER AND TEN COMMANDMENTS

This is eminently a home picture. It is more than a mere ornament; it is an ornament and a text book combined. It contains more food for thought than many whole books. Each sentence, nay, each word contains hallowed suggestions from which whole volumes could be written. It is an elegant 16x22 inch Chromo Lithograph. Sample Copy 25c. Stamps taken. CRUMB PUB. CO., Mayfair, Chicago.

TWELVE COLORS AND GILT. Always mention this paper.

\$1.00 HARNESS \$1.00

ONE DOLLAR. For above amount by post office money order or express, we will ship a set of nickel-trimmed harness, No. 6, allowing privilege of examination before remitting balance; price, \$7.50. Or set harness No. 1, \$4.95, or No. 45, \$9.60. Latter is single strap hand combination made. All genuine oak tanned leather. As to our reliability, we refer to the editor of this paper. MICHIGAN REPOSITORY CO., Ltd., Ryan Block, Saginaw, Mich.

18K. SOLID ROLLED GOLD RINGS.

LYNN & CO., 48 Bond St., New York. Solid Silver Bow Knot Ring, Friendship Ring. By mail, 25 cents. By mail, 8 cents.

These are solid gold front gent's full length initial Scarf Pins or ladies' Stick Pins. We can send any letter you want. Formerly sold for \$1. Sample by mail, Two cents. FRENCH DIAMOND RING. By mail, 25 cents.

By mail, Ten cents. By mail, Eight cents. Wedding Ring, by mail, Fifteen cents. This grand ring is sold in stores for one dollar. We warrant all the above rings to be the best 18k. rolled gold. These rings are regular One Dollar rings. We send the above at the special prices given under each article, in order to introduce our great illustrated catalogue of jewellery, sent free with the goods. Postage stamps taken as cash, but silver preferred. Send slip of paper just the size of your finger. Address LYNN & CO., 48 Bond St., New York.

If afflicted with sore eyes use Dr. Thompson's Eye-Water

Queries.

READ THIS NOTICE.

Questions from regular subscribers of FARM AND FIRESIDE, and relating to matters of general interest, will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should enclose stamps for return postage. The full name and post-office address of the querist should accompany each query in order that we may answer by mail if necessary. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Small Onions for Sets.—J. R. Hickory, Wis., writes: "Some of my onions—Yellow Danvers and Red Wethersfield—are going to be small. Can I plant the small ones next year and hope for a crop, or will they all run to seed? When is the best time to gather onion seed? Last year a bug attacked the heads. Can anything be done to stop the mischief?"

REPLY BY JOSEPH.—If your onions are larger than a marble, it would be useless to set them out for a crop of onions another year. They would undoubtedly all run to seed. Gather the heads when they begin to get yellow, and most of the seeds in them are ripening. I do not know what bug you refer to, consequently can give no advice.

Planting and Trimming Raspberries.—I. E. McEl, Portland, Oregon, would like to know how to trim blackcap and red raspberries, also the best mode of planting and cultivation.

REPLY BY JOSEPH.—Set the plants in spring or fall, in fairly good and well-prepared soil, having rows 6 feet apart, the blackcaps 3 or 4 feet apart in the row, the red raspberries even closer. Give clean cultivation. The trimming should be done during the growing season. When the young canes begin to push up above the old growth, clip the tops off about 3 feet high from the ground. Afterwards laterals will start, and these again should have the ends clipped off so as to give the bush a pyramidal shape. Remove the old wood after fruiting also.

Growing a Large Squash.—Dr. A. C. W., Hugo, Ill., writes: "When one wishes to grow a very large squash, of one of the mammoth sorts, is it best to keep the vine pinched back, preventing all the vine growth one can? I have the specimen set, and it will now, at twenty days old, weigh twenty-five or thirty pounds. The hill was prepared wide and deep—all other vines kept off, and all laterals pinched off. Would you pinch the main vine back to prevent its running?"

REPLY BY JOSEPH.—The only thing that can be done is to confine the hill to the one plant, and the one plant to the one fruit, carefully removing every other specimen that may set; also all laterals (except the one which bears the specimen), and especially those starting from below the fruit specimen. Foliage, however, is absolutely necessary for the normal growth of the squash, and it would not be wise to pinch off the vines, or any part of it, above the fruit. Whether the principle of "ringing the bark" could be applied in a case like this, as it is with grapes, etc., I do not know. Winding a string around the stem of the vine just below the squash might be tried; but the proceeding should be carefully watched.

VETERINARY.

Conducted by Dr. H. J. Detmers, M.D., Professor of Veterinary Surgery in Ohio State University.

To regular subscribers of FARM AND FIRESIDE, answers will be given through these columns free of charge. Where an immediate reply by mail is desired, the querist should enclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least two weeks before the date of the issue in which the answer is expected. Subscribers may send their veterinary queries directly to Dr. H. J. Detmers, 35 King Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column, must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered under any circumstances.

Scrotal Hernia.—E. J., Moorefield, Neb. A scrotal hernia such as you describe requires a surgical operation, which is comparatively easy if the animal has not yet been castrated. Then all that is necessary is to castrate the same with covered testicles, and to put the clamps, not on the bare spermatic cord, but on the vaginal membrane covering the cord. In such a case the clamps should be kept on for about three days.

Fistula.—F. H. H., Robinson, Kan., writes: "I have a three-year-old horse that has never been worked, and has a fistula."

ANSWER.—If you will kindly inform me what kind of a fistula it is and where it is situated, and will give a description of it and state where it leads to and what parts are affected, I may be able to answer your questions. As to most fistulas, however, it is best and cheapest to entrust the treatment to a good veterinarian.

Colic.—J. L. M., Jenkin's Bridge, Va. Your horse died of colic, probably caused by an existing aneurism in the anterior mesenteric artery, which is situated in front of the kidneys. Nothing, very likely, could have prevented the death of the animal, because it seems, according to your description, a rupture of the artery, or one of its branches, and consequent hemorrhage constituted the immediate cause of death; and besides that, such an aneurism is inaccessible to treatment.

Bloody Milk.—J. A. M., Sherman City, Mich., writes: "I have a cow three years old, that eats well, looks well, is fat, and appears in every way to be a healthy cow. She gives a large amount of milk, but one teat gives bloody milk, sometimes more blood than at others. That teat gives the most milk. It was the same last summer. The milk is not bloody in cold weather."

ANSWER.—Keep your cow as quiet as possible—perhaps in a small lot by herself, where she is not irritated, and can have some shade—and milk her quite often, but always in a gentle manner, and the bleeding, very likely, will soon cease. You cannot accomplish anything by way of medication.

Sore Withers.—P. K., Wallace, Neb. The sore withers of your horse undoubtedly has been caused by undue pressure or friction, probably by an unsuitable collar. If there is a "little hole," there is probably a fistula; consequently, you will have to insert a probe so as to find out where it leads to and where the bottom of the abscess is. This done, proper drainage must be procured, according to circumstances, either by splitting open the fistulous canal, or by making a lower opening, so as to enable the pus to be discharged without impediment. This done, the walls of the fistulous canal must be destroyed, which is usually done by means of caustics—sulphate of copper, for instance—before a healing can

be effected. But the whole treatment of such a case, if undertaken by the owner himself, is usually so tedious that consequent neglect will cause it to be unsuccessful. It is, therefore, far better and cheaper to have such an animal treated by a competent veterinarian.

Paresis.—C. A. S., Long Run, Pa., writes: "I have a four-year-old horse that becomes weak in his limbs. I first noticed the defect in him in corn working. In turning around at the ends he would trail his hind feet. In walking down hill he would lift his hind feet higher than usual and would set one foot on the other, and would frequently throw his hind feet forward and catch on the front ones and fall down. His front legs appear weak. Would it, in your opinion, do him any harm to work moderately at something like plowing in smooth ground? Would bathing his horse's limbs with water be a benefit to him? If you can give me any information in regard to what ails him and what to do, I will be very thankful."

ANSWER.—Paresis, or incomplete paralysis, in the hind quarters is but seldom cured. If you desire to do something, you may apply the same treatment advised in an answer to a similar inquiry in this present issue.

Foot-rot.—M. C. N., Portersville, Perry county, Ohio, writes: "What ails my sheep? They get raw between the toes. This rawness then works down into the sole of their feet. Sometimes the heel peels loose and wears off. It is not a running sore, but a rawness. They limp about ten or twenty days, then get better and well. The spring lambs are troubled the same way."

ANSWER.—Your sheep are affected with foot-rot. Trim their hoofs, cut away all decayed and loose horn, lay all sore places bare, and then dress them with some good antiseptic. Finely-powdered sulphate of copper is in general use, and if judiciously applied, renders good service. Excellent results, if one doesn't mind a little more work, can be obtained by applying twice a day a mixture of liquid subacetate of lead, one part, and olive-oil, three parts. It is best applied by means of small tufts of absorbent cotton. During the treatment, and also afterwards, you will have to keep your sheep on dry ground—away from wet and muddy places.

Wants to Know What Ailed the Mares.—C. W. G., Aldino, Md., writes: "We have lost two mares—one the latter part of June, the other about a month later. They were both affected in the same way. The first symptom observed was a difficulty in swallowing. They would stand at the water-trough for hours, with their mouths in the water, but not drinking. They soon became very feeble, and died in a few days. They had been pasturing, when not in use, in a four-acre lot, where there were three cows and a heifer. Do you think it safe to get a horse here and put it in another stable? Could they have contracted the disease from the cows, which seem to be in a healthy condition?"

ANSWER.—You wish to know what ailed your mares, and I wish I could tell you; but to my sorrow I cannot make it out from your description, and have no other means of information. You might have learned, though, what they died of, if you had made, or caused to be made, a post-mortem examination. As to your second question, it is not probable that horses contract disease from healthy cows.

Closed Lacrymal Duct.—J. N. O., Tennessee, writes: "I have a two-year-old filly, which has been troubled with one of her eyes for about nine months. The sight is not affected in the least, so far, and the lids are not swollen or inflamed; but her eye matters nearly all the time, and sometimes has a foul smell. At times it is very bad, and then it will almost stop running for a day or two. When she gets excited and holds her head high, a small stream of water will run out of it. When her eye is very bad, it is whitish, as if it was mixed with matter; but when it is almost well the water is perfectly clear."

ANSWER.—What you describe appears to be an obstruction in the lacrymal duct, which has its lower opening in shape of a small hole inside of the nasal cavity, not far from the nostril. Unless the obstruction can be removed by an injection or by means of a flexible probe from below, a somewhat delicate operation will be required, which can only be performed by a good surgeon, veterinarian, or human familiar with the anatomy of the parts in question. The same, after having performed the operation, will also prescribe the treatment afterwards required.

Paresis.—E. V. F., Deadwood, S. D., writes: "What ails my horse? He is apparently well, but his back seems weak, and he flinches when pressed on the back. He has difficulty in urinating, and can only do so after much effort. When he lies down to roll, he cannot rise at once, but turns himself on his haunches and twists his body about until he throws his fore feet out. I have given him medicine containing niter, but this only helps him temporarily. He has a good appetite, but his back keeps him weak."

ANSWER.—Your horse suffers from paresis, or incomplete paralysis, of the hind quarters. The cause very likely consists in an affection of the enveloping membranes of the spinal cord. It will therefore be rather difficult to accomplish much by any treatment. You may try the effect of a good counter-irritant—oil of cantharides, for instance—applied above the loins. Oil of cantharides is prepared by heating for an hour in a water-bath one part of cantharides and four parts of olive-oil. The oil then absorbs the effective principle, and is ready for use after it has been pressed out. Internal medicines can do no good. Exposure to wet and cold and to severe drafts of cold air should be avoided.

Epizootic Ophthalmia.—C. B. D., El Dorado, Kan., writes: "There is a disease of the eye among my cattle which is growing very serious. Out of one hundred and fifty head there are ten totally blind and about fifty blind in one eye. They are taken as follows: The eye commences running water and covers with a white film, which remains some time, and either goes off leaving a white spot on the ball of the eye or raises up in a blister, and finally breaks and runs out, leaving the animal totally blind."

ANSWER.—What you describe is a case of epizootic, or infectious ophthalmia, or keratitis; or, in other words, an infectious inflammation of the interior parts of the eyes. It here and there makes its appearance every summer. Most cases recover even without treatment, but all those in which the "blister," as you call it, breaks, are apt to terminate in permanent blindness. A treatment for the purpose of saving the eyesight is of use only in the beginning of the disease. An eye-water composed of a solution of corrosive sublimate in distilled water (1 part to 1,000 parts of water), applied three times a day by means of a small, glass pipette capped with a rubber bulb, is, perhaps, as good as anything that can be used; at any rate, is cheap enough. Cleanliness is essential at all stages of the disease.

A Fistulous Opening in the Lower Jaw.—J. M. R., Mayfield, Ga., writes: "Last winter a swelling, that I supposed at the time was distemper, came under my colt's jaw. It broke, and continued to discharge matter so long that I examined it, and found his jaw-bone

was enlarged on one side. I concluded then that he had fractured it by pulling back on the halter, or had been kicked. After several months a kind of tumor commenced to grow and protrude through the opening in the skin. I had a surgeon examine it, and he thought it ought to be cut out. So I had him cut it out, and the flesh was full of little splinters of bone, and the surgeon pronounced it a bony tumor. He thought it would heal up then, and it was better for a while; but another tumor has formed about like the other, and it continues to discharge all the time. I am inclined to think the jaw-bone was injured and that there is a piece of bone split off, but fast at one end, that acts as a foreign substance, and causes the trouble. The bone on that side is considerably enlarged. The opening and where the tumor is located is just on the inside of the jaw-bone."

ANSWER.—Yours is a serious case, which requires good surgical treatment, provided the degeneration of the bone—osteoporosis—has not proceeded too far. In the first place, the fistulous canal must be carefully probed and probably enlarged. Secondly, the diseased bone must be brought to exfoliation. This may possibly be accomplished by injections with creosote or carbolic acid. It will depend upon the result of a thorough examination. An application of an ointment composed of biniodide of mercury, one part, and lard, sixteen parts, upon the swelled part of the cheek, repeated once every four or five days, may also be of some auxiliary benefit. All will depend upon the result of a thorough examination by means of probing and otherwise. If that is favorable, and if an exfoliation of the diseased part of the bone has been effected, and all splinters or other foreign bodies have been removed, plain antiseptic treatment and cleanliness will effect a healing. If you had a good veterinarian available, it would be cheap and best to entrust the treatment to him.

Tapeworms.—S. S., Solon, Iowa, writes: "My sheep, and especially my lambs, are troubled with tapeworms (*Tenia expansa*). What remedy can be used for their destruction, and how administered? Can any remedy be used generally in the flock? It is almost impracticable to treat them individually. What means of prevention can be used? A few years ago my sheep were troubled with a small worm, say about three fourths of an inch long, and a little larger than a cow hair, thousands of which would get in the fourth stomach, and apparently drink the chyme, thus starving the sheep to death. I never found any attached to the mucous membrane of the stomach. Although I fancied that in time they went down into the small intestines and attached themselves to the inner coating. They proved very injurious and destructive to the sheep. I never could learn their names, nor get their life history, nor find any means of destroying them. I have heard that all tapeworms have to encyst themselves before full development in their host. If so, what does the long tapeworm encyst itself in before development in cattle or sheep? Please give general remedies for a flock as well as individual, as individual treatment in a large flock is next to impossible. My farm is a creek bottom, and while not flat, is not very rolling. Worms trouble me much more of wet seasons than dry ones."

ANSWER.—I have had good success in removing *Tenia expansa* with tartar emetic, dissolved in distilled water, ten grains to the ounce, and have given good-sized lambs one ounce and old sheep an ounce and a half of such a solution on an empty stomach. Prof. Zuern recommends pier of potassium in doses of from .6 to 1.25 grams (1 gram is about .15 grains) combined with flour and water in shape of pills. But this remedy must be followed up with a physic. As to the means of prevention, you will have to keep your sheep away from all low, wet and muddy places—keep them exclusively on high and dry land. Besides that it may be expected that the worm brood will be picked up next year, when the sheep this year have deposited their dung, and with it the proglottides of the tapeworm. As to the small worms in the fourth stomach (*Strongylus contortus*), the same measures of prevention must be used. Especially stagnant water for drinking, but particularly water in ponds, ditches, pools, etc., should be avoided. I have found tartar emetic the best remedy, if administered in time. Of course, each individual sheep or lamb must be dosed; it cannot be administered to a whole flock at once. It is far too heroic for that.

\$250,000 TO BE DISTRIBUTED.

The National Stock Remedy Company, of Columbus, Ohio, has an authorized capital stock of \$500,000, divided into 20,000 shares of \$25.00 each, and non-assessable. This company proposes to present \$250,000 of this capital stock among farmers, stockmen and poultry raisers in order to insure co-operation and assist in introducing their valuable remedies and guide to stock breeders, also their method of educating the people how to prevent and cure diseases. Their business is established and their success remarkable, and with united effort will be doubly greater. The company will mail free a copy of their Hints to Farmers and Stockmen. Send your address on a postal card and receive a copy in which you will learn all about this Co. and their plan of business.

"WORTH A GUINEA A BOX."

BEECHAM'S PILLS

CURE SICK HEADACHE, Disordered Liver, etc.

They Act Like Magic on the Vital Organs, Regulating the Secretions, restoring long lost Complexion, bringing back the Keen Edge of Appetite, and arousing with the ROSEBUD OF HEALTH the whole physical energy of the human frame. These Facts are admitted by thousands, in all classes of Society. Largest Sale in the World.

Covered with a Tasteless & Soluble Coating. Of all druggists. Price 25 cents a Box. New York Depot, 365 Canal St.

CARDS

The Globe Card Co. has always been noted for promptness in filling orders and for excellence of cards and premiums. This year we introduce our goods in thousands of new homes, we make a grand offering of 100,000 cards. We will send 12 lovely Hidden Name Cards, name on 1. Name Revealer, 1. Oracle of Remedies, 1. Large Set of All the Verses and Conundrums, 1. Great Complete Card, and this lovely GOLD RING. Don't confound this ring with the brass ones sold by many card printers; this is GENUINE ROLLED GOLD plate warranted 1 year. We lose money on this offer, but hope thus to introduce our excellent goods to many new customers. GLOBE CARD CO. Box 40, Custerbrook, Conn.

NO MONEY

Required until after you examine it. A new discovery in the manufacture of watches which enables us to sell them for about one-fourth the old price; 1000 to be put on the market as an advertisement of our new make, will you be one of the lucky persons to get your name on the list within 10 days, before they are all gone; these are no playthings for children, that take all day to wind them up, but a genuine solid stem-wind, nickel-plated silver watch, guaranteed as a timekeeper for 5 years; a printed guarantee is sent with every watch to that effect. How to get one? Cut this out and send it to us, with your full name and address, and a watch will be sent you by express. Bear in mind you are not asked to pay one cent until you have looked the watch over thoroughly and are satisfied that it is a bargain, then you pay the advertiser's price, \$2.95, and express charges; otherwise you do not pay one cent, and the watch will be returned at our expense. Address at once, KEENE'S Mammoth Watch House, 1301 Washington Street, Sample Dept. 12, Boston, Mass.

Circular Distributors Wanted.

Publishers, Patentees, Manufacturers, etc., are daily requesting us to supply the addresses of reliable circular distributors, bill posters, etc. Brunn's success is marvelous, and will open up in 200,000 AGENTS' HERALDS next issue, to be mailed to business men, new, profitable and permanent employment to one man, woman or youth in every town and hamlet in the U. S. and Canada. "The early bird catches the worm." We want a few such ads. as Brunn's (sample below) to start with in this month's MAMMOTH editions of AGENTS' HERALD.

BRUNN Nails up signs, distributes circulars, papers, samples, etc., throughout Blackhawk and surrounding counties at only \$3.00 per 1000. Address W. H. BRUNN, Waterloo, Ia.

Brunn paid \$2.40 to insert above 4 lines, June '90. He began during the summer. That ad. paid him, is paying yet. He has been kept constantly busy, employs three men to assist him, clearing on their labor from \$10 to \$15 a day distributing circulars at \$3.00 per 1000 for many firms, who saw his ad. in THE HERALD. It costs every firm at least \$10 in postage alone to mail 1000 circulars. A saving to each firm who employs you of \$7 per 1000. Ten firms may each send you 1000 at the same time, making 1000 packages of 10 each, for distributing which you would promptly receive \$30, \$15 in advance and \$15 when work is done. Parents make your boys a present. Start them in this growing business. Begin this next business before some one in your county gets the start of you. "Come in on the ground floor." Instructions. How to Conduct the Business Free, to each distributor only, who sends us \$2.40 cents cash or postage stamps for a 4 line "ad."

AGENTS' HERALD, No. 2 S. 5th Street, Philada., Pa.

PROVED BY LIVING WITNESSES THAT THE OWEN ELECTRIC BELT AND APPLIANCES

cure more people than any other one remedy under the sun.

NO HARM can come from their use. A genuine current of electricity, continuous, can be made mild or strong, or reversed at the pleasure of the wearer. All of the above fully confirmed and indorsed, by hundreds who have tried them, in our

ILLUSTRATED CATALOGUE. Also, description, cuts, prices and other valuable information, printed in English, German, Swedish and Norwegian languages. This catalogue or a treatise on nupture cured with Electric Truss will be mailed to any address on receipt of six cents postage.

The Owen Electric Belt & Appliance Company, MAIN OFFICE AND ONLY FACTORY, THE OWEN ELECTRIC BELT BUILDING, 205-211 State Street, corner Adams, CHICAGO, ILL. New York Office, 826 Broadway. THE LARGEST ELECTRIC BELT ESTABLISHMENT IN THE WORLD. MENTION THIS PAPER.

Agents Wanted in Salary

Would you like to make \$250.00 per month from now until spring? Write for particulars to-day; all that is required is a little Vim, Vigor, Pluck and Push and you can make it. We want a live, wide-awake representative either man or woman, in your locality to represent us and sell by sample, no peddling, our goods are new and as staple as flour, and you have the chance to establish a permanent business for yourself that will pay you handsomely. Address "Manufacturers," P. O. Box 5308, Boston, Mass.

PRINTING OUTFIT 15¢

COMPLETE. 4 alphabets rubber type, type holder, bottle, ink, ink pad and fountain. Put up in neat box with directions for use. Satisfaction guaranteed. Worth 50c. Best (Globe Marker, Card Printer, etc. Sets names in 1 minute, prints 500 cards an hour. Sent postpaid 15c; 2 for 25c. Cat. free. R. H. INGERSOLL & BRO. 65 Cortlandt St. N.Y. City.

WE WANT YOU

To act as our agent. We will treat you well and pay liberally for your services. The work is easy, pleasant and adapted to both young and old of either sex. GEO. STINSON & CO., Box 154, PORTLAND, ME.

CLEVELAND OR HARRISON!

To immediately introduce our large illustrated catalogue of Campaign Badges, Emblems, Watches and Jewelry, we will send an Elegant GOLD PLATED CAMPAIGN BADGE FREE of all cost providing you send two stamps to pay the postage. State which one you want. Free offer limited to one who will show our goods. WILLIAMS, 125 S. Halsted St., Chicago, Ill.

If afflicted with sore eyes use **Dr. Thompson's Eye-Water**

Our Miscellany.

We rise by the things that are under feet,
By what we have mastered of greed and gain,
By the pride disposed and the passion slain,
And the vanquished ills that we hourly meet.

We hope, we aspire, we resolve, we trust,
When the morning calls us to life and light;
But our hearts grow weary, and ere the night
Our lives are trailing the sordid dust.

Only in dreams is a ladder thrown
From the weary earth to the sapphire walls;
But the dreams depart and the vision falls,
And the sleeper wakes on his pillow of stone.

Heaven is not reached at a single bound,
But we build the ladder by which we rise
From the lowly earth to the vaulted skies,
And we mount to the summit, round by round.

—J. G. Holland.

BRICKDUST, applied with a piece of raw potato instead of a cloth, will clean knives and make rust and stain disappear very quickly.

IN the familiar song, "Pull for the shore," there is a line, "Cling to self no more." In a colored school it was discovered that the children had been singing, "Clean yourself no more," with great spirit.

THE farmer in these days who neglects to read one or more agricultural publications, or participate in farmers' conventions, or devote a certain amount of attention to experimental work, will die poor. Farming is becoming a scientific vocation.—*American Farmer*.

A PRACTICAL American has discovered that an average waltz takes one over about three quarters of a mile. A square dance is half a mile, and a galop is a good mile at a run. A girl of ordinary attractions and attainments would cover easily during the evening fifteen miles, without the intermission strolls.

IN excavating some ancient Aztec ruins in the direction of Chace Canon, New Mexico, Governor Prince has unearthed twenty stone idols of a different type from any before discovered. They are circular in shape, forming discs from six to fifteen inches in diameter, the upper half containing a deep carved face, and the lower half rudimentary arms in relief. The idols are believed to be at least 600 years old.

THERE never has been a period in the history of this or any other country when the general rate of wages was as high as it is now, or the price of goods, relatively to the wages, as low as they are to-day; nor a period when the workman, in the strict sense of the word, has so fully secured to his own use and enjoyment such a steadily and progressively increasing proportion of a constantly increasing product.—*Edward Atkinson, in Forum*.

THERE are degrees of courage, and each step upward makes us acquainted with a higher virtue. Let us say then, frankly, that the education of the will is the object of our existence. Poverty, the prison, the rack, the fire, the hatred and execrations of our fellow-men appear trials beyond the endurance of common humanity; but to the hero whose intellect is aggrandized by the soul, and so measures these penalties against the good which his thought surveys, these terrors vanish as darkness at sunrise.—*Emerson*.

IT has been just 100 years since gas was first used as an illuminant by William Murdoch, who lighted up his home at Redruth, in Cornwall, by means of coal gas made in an iron kettle, into which a rough iron tube was inserted. Six years later the invention was developed on a larger scale in the Soho foundry, at Birmingham. In 1803 the London Lyceum theater was lighted by gas; Piccadilly, London, in 1807, and in 1816 all London was lighted in the same way. In our own country David Melville, of Newport, R. I., secured a patent for the manufacture of gas in 1800, and adapted it to the Beaver Tail lighthouse, and it has since become one of the principal methods of illuminating lighthouses.

WHEN Dexter trotted to a record of 2.17½, it was the opinion of some good judges that the limit of trotting speed had been reached. Even so astute a horseman as Robert Bonner entertained that opinion, judging from remarks with which he was credited while Dexter remained king. A few years since, Mr. Bonner was so confident that no trotter could ever get a record of 2.05, that he offered to give \$5,000 to the owner of the first horse which could accomplish that feat. The only way that we can see for Mr. Bonner to save that \$5,000 is to buy Martha Wilkes right off, and have Doble prepare her for a supreme effort. There is not the slightest doubt but what she is the fastest trotter ever foaled, and it would not surprise us in the least to see her make a successful bid for that \$5,000, if Nancy Hanks don't get there before her.—*American Horse-Breeder*.

GOOD ROADS WITHOUT COST.

When roads are as bad as they are now and have been most of the last six months, it is the best time to work up such a sentiment against bad roads and in favor of good roads, as will produce practical results. We suggested in a late issue that the state convicts might be used to better advantage in doing this sort of work than in any other way. We asked for a discussion of the subject in our columns, and

suggestions as to the best methods of utilizing them. Thus far we have had no responses. Are the farmers of Missouri so indifferent to this important matter that they will not even discuss it? We believe if they will take sufficient interest in the subject, that by the time the next general assembly is in session they can secure the enactment of a law to provide for the building of roads by the convicts.

But strange to say, there is not only apathy, but even positive aversion on the part of some farmers towards taking any action in regard to roads. In Illinois the same condition seems to exist, judging from the following, taken from the *Farmers' Review*:

"It is rumored that certain farmers are getting their backs up, so to speak, over the agitation in favor of improved roads. They fear that the intervention by the state in road-making or bond-issuing might create a permanent and unnecessary debt on the taxpayers of the state. They say that riders of bicycles and other city people are at the back of the agitation, and that while these people would receive the benefit, the farmers would have to foot the bills.

"Now, if the latter should prove true, the *Farmers' Review* would use its influence against the robbing of its rural patrons. But we do not believe the alleged antagonism to be based upon sound reason or fact. The improvement of our country roads is the greatest necessity of the day in agricultural affairs, and no matter who are responsible for the present agitation for improvement, they are deserving of hearty thanks. The class of roads that would make good wheeling possible for bicycles in the few months of summer would make good going for the farm wagons and buggies the year around. The bicycle we have with us but once in a while; the farm wagons and carriages are in use daily throughout the year.

"Were good roads the result from the present agitation, who, then, would be the gainers? The farmers, to be sure. Not only would they be gainers on account of more facility in moving their crops and conducting their business, the value of their farms would, too, be greatly enhanced. It is a difficult matter to sell farming land to the man from the east unless the roads in the district are really good. He has been accustomed to good roads, and in moving west he does not like to buy in a mud-road locality. But no argument is required in favor of good roads, for no man knows better than the farmer the real value of improved highways.

"And as regards the cost of improving the roads, we cannot see that there should be any real cause for anxiety. We fully believe that the present condition of our country roads results largely from poor management. So long as the improvement of the country roads depends entirely upon working out the poll taxes, or, in other words, having 'road-making sociables' in each township once a year, the present state of affairs will not materially change.

"On the other hand, were all road taxes paid in cash, and all work of improvement and repair done by skilled labor, under the direction of competent road engineers, it would not require many years to make great progress towards improvement. This, as shown by the numerous articles in the *Farmers' Review*, has been the result in every district where cash taxes have been paid, and where the people have been awakened to the advantage of good roads. Instead of kicking against the advent of bicycles, farmers should regard them as signs of the improvement in roads so long needed throughout the country.—*Journal of Agriculture*.

THE ANTI-OPTION BILL.

One of the most exciting debates that took place during the recent session of congress was over the so-called "anti-option bill."

The buying and selling of wheat, cotton and produce has of late years been conducted largely on a peculiar plan.

A miller or exporter knows in August that he will need a certain quantity of wheat in October. He goes to the produce exchange, and offers a price for a contract to deliver to him at any time during October a certain quantity of grain. Another trader accepts his bid, and contracts or engages to make the delivery in October, at the price fixed.

This is called a "future" or "option" contract. It may be that the wheat eventually delivered in October was not yet gathered from the field when, in August, the contract was made.

If this is the case, the man who contracted to deliver the wheat in the later month probably made the contract in the belief that when October came he could buy the grain for delivery at a lower price than the miller or exporter paid him for his contract.

If prices do decline, the seller of "futures" makes his profit. He has guessed correctly the turn the market will make. If they advance, he loses. He has guessed wrong.

There has been a great decline in wheat prices of late years, and the prices obtained for last year's great harvest were disappointing. For this there are many explanations, based upon the state of the world's grain trade.

But the farmers conceived the idea that the decline was caused by the selling of "futures" in the produce exchanges. They knew that the system of option sales brings into existence the class of traders known as "bears," whose profits depend upon their success in depressing prices by heavy sales of "futures;" that is, of goods which they do not possess.

The "bears," it appeared, had been triumphant.

The farmers who hold this opinion believe that but for "future" sales there would have been no decline, and they accordingly wish, in effect, to prohibit such "future" sales by law.

A bill was introduced in congress, designed to carry out the ideas of the farmers and put a stop to "option" trading. It placed on each sale of the kind a tax so heavy as to make profit impossible.

There were two chief arguments made against the bill. One was that it was unconstitutional, being a use of the government's taxing power, not for the purpose of raising revenue, but for the purpose of stamping out an established business.

The other was that the bill was unjust in itself; that every seller of "futures" had to become a buyer in order to meet his contracts, and hence he could not depress prices, unless the market supply and demand were such as to make a fall in prices inevitable. There were many other arguments in the case, but for the most part the debate hinged on these.

Early in June, after a brief discussion, the bill passed the house of representatives, and the majority in favor of it was very large. In the senate it met with great opposition, and a vote was held off until the close of the session was almost at hand.

Finally the advocates of the "anti-option" bill agreed to give up for the time being, and to postpone its consideration until the next session, and the contest was over. It will come up again in December, and the result of the vote will be awaited with great interest.—*Youth's Companion*.

Hearts, like apples, are hard and sour,
Till crushed by Pain's resistless power;
And yield their juices rich and bland
To none but Sorrow's heavy hand.
The purest streams of human love
Flow naturally never;
But gush by pressure from above,
With God's hand on the lever.

—J. G. Holland.

WHAT GOOD ROADS MEAN.

They would make it possible for the farmers to take advantage promptly of the highest market, no matter at what season of the year.

They would save him days and weeks of time which he wastes every year wallowing through the disgusting mire of dirt roads.

They would reduce to a minimum the wear and tear on wagons and carriages.

They would lessen the expense in keeping horses in working order, and fewer horses would be required in the country to perform the farmer's work.

They would require less to keep them in repair than do the dirt roads.

They would make it easier for a team to pull several tons over their smooth surface than to drag a wagon through the mud.

They would afford ready communication with the outside world at all seasons of the year.

They would save the farmer many vexations and nervous strains.

They would practically shorten the distance to the local market.

They would increase the demand for country and suburban property.

They would be free from dirt in summer and mud and ruts in fall, winter and spring.

They would bring every farming community into closer social relations.

They would make an evening drive a pleasure instead of a vexation, as it is now.

THE FIRST SUSPENDERS GIRL.

"It was late in the winter of 1890-91 that suspenders were first displayed as a part of a feminine costume in Philadelphia," said a member of the local Four Hundred at Cape May a few days ago, "and I had quite forgotten the incident until this morning, when I read something in a newspaper letter from Bar Harbor about the girl who first displayed the novelty.

"And where do you suppose she took occasion to make the display? Why, of all the places—the Assembly, and you may well believe me that they created not only a mild sensation, but a good deal of adverse comment. The suspenders were of rich yellow satin, and supported a black, V-shaped belt, also of satin, and the rest of the costume was of black tulle and gold braid. The girl was handsome, with a splendid figure, and was not a Philadelphian, although she often visits here, where she has relatives high in society. One thing alone prevented we women from considering the costume a freak, and that was that the girl had been stopping for two months with one of the Vanderbilts in New York, and it was, therefore, likely that the idea had just come from Paris. No one copied the idea that season, however, nor have I seen it applied to a ball dress since."—*Philadelphia Record*.

PROTECTING THE WOOL GROWER.

Mortimer Whitehead, lecturer of the National Grange, Patrons of Husbandry, writes that capital invested in woolen mills is well protected by the tariff. If the free wool bill lately passed by the house of representatives had become a law, capital invested in sheep

farms, buildings, sheep and wool would have no protection. There are about four times as many farmers engaged in "making" wool as there are manufacturers and all their employees engaged in making woolen goods.

Our farmers produce upwards of 300,000,000 pounds of wool annually. Capital invested in barns and equipments, \$408,291,200; capital invested in sheep, \$124,062,706; total capital, \$532,353,906. Number of flocks and flockmasters in the United States, 1,020,900; number of men employed by flockmasters, 105,000; total number of men in wool industry, 1,125,900. Value of wool product annually, \$75,000,000; value of sheep sold annually for pelts and food, \$20,000,000; total, \$95,000,000.

ANOTHER ECONOMY.

Many farmers think it all "grist" that passes the fourth stomach of his cows, so far as manure value is concerned. Knowing nothing about the plant-food value of different foods, or what the elements of plant-food are, he thinks that the voidings from straw or meadow hay ration are just as valuable as those from cotton-seed or linseed meal, oats, or clover; and when you talk to him about using absorbents in his stables, he will say: "I use sawdust, straw and horse manure, muck, etc." Tell him that, while they will absorb, or "soak up" the liquids, but will not hold the nitrogen, 60 per cent of which is in the urine, but that land-plaster will, which costs but a trifle, and he will listen with the greatest unconcern imaginable. "Saving at the spigot and losing from the bung," is what he persists in practicing, and the result is decreased food for his plants, and that means decreased food for the animals.—*Farmer and Homes*.

PROTECTIVE INOCULATION AGAINST SWINE-PLAGUE.

Professor H. J. Detmers, of the Ohio State University, of Columbus, Ohio, has prepared a very interesting paper, which appears in *FARM AND FIRESIDE* of July 1st, on "Protective Inoculation Against Swine-plague, or So-called Hog-cholera." The professor's discovery of a preventive of this devastating disease, if such it prove, is very important, and will save millions of dollars to the country. We have not room to print his lengthy statement, but simply call attention to the subject at this time, and will watch the progress of his discovery for our readers. In the meantime we refer the subject to the professor, whose address is Columbus, Ohio.—*Farm Journal*.

ON AIRING THE BED.

This is one of the important matters in household management to which too little heed is given. Beds should be aired, and well aired, every day. With regard to the length of time the airing should continue, *Good House-keeping* says: Just as long as possible. A good way to air the clothes is to place two chairs at the foot of the bed, two or three feet away, then draw the clothes from the bed over them smoothly, leaving the mattress bare. In this way the mattress is aired and the clothes have a better chance than when thrown over chairs. The pillows are beaten up and placed in the air, but not in the sun, as that makes them smell oily.

A BIG BIBLE, THIS.

A German lady living in Manchester, England, possesses what is supposed to be the largest Bible, in one volume, in the world. It is an heirloom, two hundred years old, with pages two feet long, and but little less in width, and at the head of each page is a line in red ink, which, translated, reads: "This is a history." Another resident of the same city has compiled, so to speak, a Bible in ninety volumes, his additions to the text consisting of pictures and photographs, which he has collected to the number of nearly ten thousand.

POISON IVY.

Here is a remedy for poisoning from poison ivy which is said to relieve very quickly. It is simply fifteen drops of bromine in two ounces of olive-oil, applied to affected parts.

CUPID AND CUPIDITY.

Newman—"Did you marry for love or for money?"

Oldby—"Both. I married for love of money."



FREE

A fine 14k gold plated watch to every reader of this paper. Cut this out and send it to us with your full name and address, and we will send you one of these elegant, richly jeweled gold finished watches by express for examination, and if you think it is equal in appearance to any \$25.00 gold watch, pay our sample price, \$3.98, and it is yours. We send the watch our guarantee that you can return it at any time within one year if not satisfactory, and if you sell or cause the sale of six we will give you One Free. Write at once as we shall send out samples for sixty days only.

THE NATIONAL MFG & IMPORTING CO.,
334 Dearborn Co.,
CHICAGO, ILL.

FREE

If you will send us within the next 30 days a photograph or a tintype of yourself, or any member of your family, living or dead, we will make you one of our finest \$25.00 life-size **CRAYON PORTRAITS** absolutely free of charge. This offer is made to introduce our artistic portraits in your vicinity. Put your name and address back of photo., and send same to **Cody & Co.,** 755 DeKalb Avenue, Brooklyn, N. Y. References: **Rev. T. DeWitt Talmadge,** all newspaper publishers, Banks, and Express Companies of New York and Brooklyn. P. S.—We will forfeit \$100 to any one sending us photo. and not receiving crayon picture free as per this offer.

Smiles.

THE PLUMBER MAN.

The plumber came up to plumb
My uncle's pump in town;
First place, he tore the cellar up,
Then tore the garret down;
And then he told us with disgust
That nary one the pipes was bust.

He jumped into his buggy quick,
And fast he drove away,
But sent back, with a load of tools,
Another man next day
Named Ike, who brought along with him
An ornery boy called "Warty Jim."

This Ike he pumpt and pumpt the pump;
The boy poured water in;
The man kept jawing at the boy,
The boy jawed back agin;
Then both sat down and ate a snack
Before they took the wagon back.

Next week the boss he came along,
And at the pump he frowned;
He sent me for the monkey-wrench,
While he went pounding round,
And pried the mantelpieces out
And hammered off the water-spout.

Bime-by he hurried off and sent
Three Dutchmen and some wire,
Who brought a rusty stove and made
A smoky charcoal fire.
When they had smoked their pipes, then they
Took up that stove and went away.

Well, after that, I recollect
A chap with solder came,
And then a tired colored gent
Who brought more of the same;
Then up this Ike he came once more,
And at the other two he swore.

The boss then rode up with his boy,
That ornery, sassy gump;
He said there was no other way
But buy a brand new pump,
But uncle looked below the sink
And found the leak as quick as wink.

And uncle took a piece of rag
And tied it round the leak,
And then the pump was all O. K.
But in about a week
The plumber man sent in his bill—
Six hundred dollars and one mill.

—W. H. Venable.

A DARK MYSTERY.

It was her first dinner party; naturally
she was somewhat nervous at first, but
the awkwardness wore away after a little
and she was soon quite at ease. The
dessert was being served and the stately
clad waiters were passing pretty, little,
pink-frosted cakes, to be eaten with the iced
creams. A plate of them was held before the
young lady, who looked them over and said:
"I don't care for any."

The waiter was moving away when she saw,
as she thought, an *éclair* on the farther side of
the plate. She was fond of chocolate.

"Yes, I will, too," she said, reaching over for
the *éclair*, "there is one with chocolate on it."

"Beg pardon, miss," said the waiter, as she
tried to pick up the tempting morsel, "beg
pardon, miss, but that's my thumb."

SURE TO BE SATISFIED.

"I'm nearly always disappointed in the
Christmas gifts my husband buys me," con-
fessed Mrs. Dimmick to Mrs. Kieckshaw.

"Is that so?"
"Yes. He means well, but he doesn't seem
to get me the things I want. I try to appear
pleased, of course, but I'd rather have things I
care for. I give him hints, but he never seems
to catch them."

"Now, I never have any trouble like that
with Mr. Kieckshaw."

"How do you manage it?"

"Easily enough. I buy him for his Christ-
mas present just what I want to have myself,
and he gets for me just what he thinks he
would like to have, and then we exchange the
articles with each other."

HARD TO PLEASE.

The tall, slim man with spectacles and
shaggy hair, who had been fishing from a pier
in the neighborhood of Jackson park, threw
his string of fish back into the lake, put away
his rod and line and turned to go.

"Even the fish down here," he muttered
savagely, "are monopolists. There's nothing
but 'ring' perch."

And he shook his fist in the direction of the
administration building and walked rapidly
toward an anti-syndicate steamer that was
whistling for passengers.—*Chicago Tribune*.

BETTER THAN SOME CLAIM.

"Billings got his pension yet?"
"I didn't know Billings was entitled to a
pension."

"He thinks he is, anyway. He claims to
have contracted a chronic case of that tired
feeling from reading war articles in the mag-
azines."—*Indianapolis Journal*.

AN UNFAILING SIGN.

Wife (impatiently)—"This new dress doesn't
set well, and I know it."

Husband—"What makes you think so?"

Wife—"It's too comfortable."—*New York Weekly*.

CONQUERED.

"Johnny," said his mother, "if you don't
quit smoking cigarettes you won't grow a bit."

"Don't care if I don't," responded Johnny,
sullenly.

"And, of course," continued the good
woman, "if you don't get any bigger you will
still have to wear clothes made from your
father's old ones."

"I guess I'll quit, ma."—*Indianapolis Journal*.

KILLED HIS MAN.

Cowboy—"Guess you never killed a man, did
ye?"

Tenderfoot—"Huh, I helped to kill half a
dozen of them."

"Here?"

"No, at college."

"Fightin' with 'em?"

"No. Initiating them."—*New York Weekly*.

A FEW YEARS HENCE.

Saidso—"What is the Amalgamated Chair-
bottomers' Association boycotting the public
schools for?"

Herdso—"They want an item in one of the
text-books changed."

Saidso—"In what particular?"

Herdso—"They want it to read: '48 seconds
make one minute.'"

A NATURAL MYSTERY.

"John, we must rent another house."

"Why?"

"Every night I can hear ghostly sighing and
whistling. It seems to come from the pipes,
and I believe the place is haunted."

"Shouldn't wonder. The former owner
dropped dead, with the plumber's bill in his
hand."

GOT A VACATION.

Bowles—"Did Bullion give you a vacation?"
Knowles—"Two weeks. But I won't go back
to work for him again unless he retracts his
words."

Bowles—"What did he say?"

Knowles—"He said not to come back after
the two weeks were over."—*Jewelers' Circular*.

A CLEVER RUSE.

"What's the idea of putting that card 'sold'
by the picture?" asked the man who had given
the artist room in his front window to display
his latest creation.

"Then some one will be sure to want to buy
it," replied the artist.

HIS ONE SUPERSTITION.

"The only thing that I am superstitious
about," remarked Barlow, "is to return home
from the club after one o'clock and find my
wife awake. It is a sure sign of ill luck."

THIS PAPER

One Year Free

To any one sending us only one NEW
yearly subscriber at the regular price,
50 cents, for the paper alone.

This offer is good now under the following
conditions:

The NEW subscriber must be a per-
son whose name is not now on our
list, and must be a person whom you have
sought out and solicited to take the paper and
who has consented to receive it. A change
from one member of a family to another is not
securing a NEW subscriber.

The new subscriber will receive the paper a
full year for the regular subscription price, 50
cents, but will not be entitled to any
present or premium with it except upon
payment of the full "Price, including one
year's subscription." For example: Pre-
mium No. 539, *Perfection Hammock*, and
this paper one year for only \$1.50; or, "*Uncle
Tom's Cabin*" and this paper one year for 60
cents.

Send us a new subscriber under these terms
and we will send you the paper free for one
year as your reward.

This offer must not be combined with
any other, and applies to this paper
only.

Accept it now, while it is good. It may be
withdrawn.

We have an office at 927 Chestnut Street,
Philadelphia, Pa., also at Springfield, Ohio.
Send your letters to the office nearest to you
and address

FARM AND FIRESIDE,
Philadelphia, Pa., or Springfield, Ohio.

GUARANTEED CURE
OR NO PAY.

Nothing Fairer Than This.

When we say cure, we do not mean simply to
stop it for the time being, but a

PERMANENT AND POSITIVE CURE
For Rheumatism, Neuralgia, Dyspepsia,
Headache, Constipation, Biliaryness, Ner-
vousness, Sleeplessness, Impure Blood,
and all diseases arising from a disordered
Liver. Write for Treatise, Testimonials, and
Free Sample Bottle of

DR. ROC'S LIVER, RHEUMATIC,
and NEURALGIA CURE to
CULLEN & NEWMAN,
136 GAY ST., Knoxville, Tenn.

LADIES WHO WILL DO WRITING

The tremendous sale of my preparation,
Gloria Water, has so increased my
correspondence that I will guarantee good wages to ladies who will do writing for me at home. Address
in own handwriting MISS EDNA L. SMYTHE, Box 1101, South Bend, Ind. Mention paper.

WILL MAKE GOOD WAGES.

FREE

For 30 Days. Wishing to introduce our CRAYON PORTRAITS and at the same time
extend our business and make new customers, we have decided to make this Special Offer:
Send us a Cabinet Picture, Photograph, Tintype, Ambrotype or Daguerrotype of yourself
or any member of your family, living or dead and we will make you a CRAYON POR-
TRAIT FREE OF CHARGE, provided you exhibit it to your friends as a sample of our
work, and use your influence in securing us future orders. Place name and address on
back of picture and it will be returned in perfect order. We make any change in picture
you wish, not interfering with the likeness. Refer to any bank in Chicago. Address all
mail to THE CRESCENT CRAYON CO., Opposite New German Theatre, CHICAGO, ILL. P. S.—We will forfeit
\$100 to anyone sending us photo and not receiving crayon picture FREE as per this offer. This offer is bonafide.

AGENTS

Coin Money selling
Beveridge's Automatic
Cooker. Every woman
buys. Best and cheapest
cooker sold. Big Profits to good workers, male or
female. Sample's weight 12 oz. Adv'g matter furnished
For circulars address W. E. BEVERIDGE, Baltimore, Md.

CONSUMPTION

(except last stages), CATARRH, BRONCHI-
TIS, ASTHMA, and all Diseases of the Lungs,
surely cured by the New Andral-Broca Dis-
covery. Not a Drug, but a New Scientific Method
of Home Treatment. Cures Guaranteed. Sent
FREE to all who apply. Try it FREE, and pay
if satisfied. State age and disease in full. Address
NEW MEDICAL ADVANCE, 62 E. 4th St., Cincinnati, O.

CAMPAIGN

BADGE, gold plated, Card Agt's Outfit
& Present 4c. Tuttle P. Co., No. Haven, Ct.

CARDS

WE LEAD IN LATEST STYLES AT LOWEST PRICES.
FANS, BASKETS, LACE EDGE CARDS, Etc. SAM-
PLES 2c. CLINTON BROS., CLINTONVILLE, CONN.

500 SCRAP

PICTURES, AUTO. VERSES & RIDDLES
20 STYLES OF CARDS 2c. & PRESENT
FANDED & CO., MONTWELL, CONN.

CARDS

LATEST STYLES, FINEST GOODS, LOWEST
PRICES, BEST PREMIUMS. SAMPLES
JEWEL CARD CO., CLINTONVILLE, CONN. 2c

YOUR NAME

on 25 Lately Cards, 1 Ring, 1 New Foun-
tain Pen, Scarf Pin, Watch Chain, Col-
lar Button, Cuff Buttons, and our new POPULAR MONTHLY
3 mos., all for 10c. & 2c. for postage. CLINTON BROS., CLINTONVILLE, CONN.

YOUR NAME ON 25 LATEST STYLE CARDS

on 25 Lately Cards, 1 Ring, 1 New Foun-
tain Pen, Scarf Pin, Watch Chain, Col-
lar Button, Cuff Buttons, and our new POPULAR MONTHLY
3 mos., all for 10c. & 2c. for postage. CLINTON BROS., CLINTONVILLE, CONN.

NAME ON 25 SILK Fringed Floral Cards

400 Scrap Ornaments, 1 Lace Pin, 1
Watch Chain, 1 Ring, Agent's New Style Sample Book &
Outfit, all 10c. CLINTON BROS., CLINTONVILLE, CONN.

CUT THIS OUT

and send with your name and ex-
press office address and we will send you free
to examine and take a SOLID GOLD finished watch that you can sell for
Ten Dollars. If it suits, you send us Four Dollars and express charges;
if not, return it to me. Mention whether Ladies' or Gents' size is desired.
W. S. SIMPSON, 37 College Place, N. Y.

Ohio Electric Co., Cleveland, want agents. Cat. free.

BOYS and Girls do you want a bicycle? We give them
away free. Address Fenton Polish Co., Greenwich, N. Y.

MANAGER WANTED

To take charge of Brauch House in
each State. Address Fred De Haven, Louisville, Ky.

RUBBER STAMPS

Best made. Immense Catalogue Free
to agents. The G. A. HARPER MFG. CO., Cleveland, O.

WATCH FREE

If you want one send a stamp to the
National Illus. Magazine, Washington, D. C.

LADY WANTED

Liberal Terms selling our Special-
ties. Union Nurseries, Rochester, N. Y. 1843-1891.

6th and 7th Books of Moses, Aliburtus Magnus,

Long Lost Friend, Mineral Rods and Dip
Needles. B. G. Stauffer, Bachmanville, Pa.

WANTED

Women to take crochet work to do at home.
City or country. Steady work. Particulars on appli-
cation. L. WHITE & CO., 209 State St., Chicago, Ill.

QUIT

AR self-taught without notes; 24 charts 50c
BANJO without notes (80 pp., 100 pieces) \$1.
Cir. & cat. of inst's free. E. C. HOWE, 85 Fifth av, Chicago

\$5

A DAY. Agent samples Free. Horse
owners buy 5 to 9. 20 fast selling special-
ties. E. E. Brewster, Box 29, Holly, Mich.

CUT IN TWO

Prices of Sewing Machines, Saws, Scales
Blacksmith's Tools, Road Carts, Buggies,
Harness and 1000 other things. List Free.
CHICAGO SCALE CO., CHICAGO, ILL.

FREE TO ALL

Either VIOLIN, GUITAR, BANJO
or MANDOLIN player's Guide Well
worth \$1. Ad. C. A. LOHMAN, St. Louis, Mo.

\$525

Agent's profits per month. Will prove
it or pay forfeit. New Articles just
out. A \$1.50 sample and terms free. Try
us. Chidester & Son, 28 Bond St., N. Y.

BEST

PAYING THING for Agents is our PHOTO-
GRAPH FAMILY RECORD PICTURE.
We give you liberal terms. Address Dept. W
C. P. CORY & CO., 41 to 45 Jefferson St., Chicago

AGENTS WANTED ON SALARY

or COMMISSION, to handle the New
Patent Chemical Ink Erasing Pencil. Agents making
\$50 per week. Monroe Eraser Mfg. Co., x 98, LaCrosse, Wis.

FOR

NOVELTIES AGENTS

Convertible Wire Baskets, Handy Button, Self-
threading Needle & many others. Catalog sent free
V. Cassgreen Mfg. Co., 134 Van Buren St., Chicago, Ill.

WHEW! What a spinner!

Does it never stop? Splendid house
amusement. Big premiums to buyers. \$15.00
monthly for best record. \$10.00 second. \$5.00
third. Outfit by mail 25 cts. CYCLONE
MFG. CO., 36 Pacific Ave., Chicago, Ill.

Dr. Chase's New and Receipt Book

Complete
AND HOUSEHOLD PHYSICIAN.
"The Growing Life Work" of the Great Old Doctor.
Nearly 900 pages. Newly Illustrated. The great-
est selling book in the world to-day. Big terms to
agents. Printed in English and German. Address
F. B. DICKERSON CO., Department E, Detroit, Mich.

A PRESENT.

SEND us your address and we will make you a
present of the best Automatic WASHING
MACHINE in the World. No wash-board or rub-
bing needed. We want you to show it to your friends,
or act as agent if you can. You can COIN MONEY.
We also give a HANDSOME WATCH to the
first from each county. Write quick. Address
N. Y. LAUNDRY WORKS, 80 Murray Street, N. Y.

\$30 to \$50

A
WEEK

I WANT an honest, earnest
man or woman in every coun-
ty to take the whole agency
for an article that is needed
in every home and indis-
pensable in every office.
SELLS AT SIGHT, in
town or country. You can
make \$700 in three
months, introducing it, after which it will bring
you a steady income. Splendid opening for the
right person. Don't lose a moment. Good jobs
are scarce and soon taken. Write at once to
J. W. JONES, Manager, Springfield, Ohio.



LOVELY FACES,
WHITE HANDS.
Nothing will
WHITEN and CLEAR
the skin so quickly as
Derma-Royale

The new discovery for dissolv-
ing and removing discolorations from the cuticle,
and bleaching and brightening the complexion. In
experimenting in the laundry with a new bleach for
fine fabrics it was discovered that all spots, freckles,
tan, and other discolorations were quickly removed
from the hands and arms without the slightest in-
jury to the skin. The discovery was submitted to
experienced Dermatologists and Physicians who pre-
pared for us the formula of the marvelous Derma-
Royale. THERE NEVER WAS ANYTHING LIKE IT. It is
perfectly harmless and so simple a child can use it.
Apply at night—the improvement apparent after a
single application will surprise and delight you. It
quickly dissolves and removes the worst forms of
moth-patches, brown or liver spots, freckles, black-
heads, blotches, sallowness, redness, tan and every
discoloration of the cuticle. One bottle completely
removes and cures the most aggravated case and
thoroughly clears, whitens and beautifies the com-
plexion. It has never failed—it CANNOT FAIL. It is
highly recommended by Physicians and its sure
results warrant us in offering

\$500 REWARD.—To assure the public of its
merits we agree to forfeit
Five Hundred Dollars CASH, for any case of moth-
patches, brown spots, liver spots, blackheads, ugly
or muddy skin, unnatural redness, freckles, tan or
any other cutaneous discolorations, (excepting birth-
marks, scars, and those of a scrofulous or kindred
nature) that Derma-Royale will not quickly remove
and cure. We also agree to forfeit Five Hundred
Dollars to any person whose skin can be injured in
the slightest possible manner, or to anyone whose
complexion (no matter in how bad condition it may
be), will not be cleared, whitened, improved and
beautified by the use of Derma-Royale.

Put up in elegant style in large eight-ounce bottles.
Price, \$1.00. EVERY BOTTLE GUARANTEED.

Derma-Royale sent to any address, safely packed
and securely sealed from observation, safe delivery
guaranteed, on receipt of price, \$1.00 per bottle.
Send money by registered letter or money order with
your full post-office address written plainly; be sure
to give your County, and mention this paper.
Correspondence sacredly private. Postage stamps
received the same as cash.

AGENTS WANTED Send for Terms
Sells on Sight **\$10 A DAY.**

Address **THE DERMA-ROYALE COMPANY.**

Corner Baker and Vine Streets. CINCINNATI OHIO.

LOOK HERE.

Do you use lamps? Our patent attachment im-
proves the light, avoids dirty work in filling, saves
time and money. You need it. All housekeepers
need it. Samples free; and Gold Watch
premium to first each week. Write at once.
Agents wanted. Good pay, steady work, 3 months
subscription to Monthly Journal for 2c. stamp.
J. BRIDE & CO., Nassau St., New York, N. Y.

Mention this paper when you write.

A BIG OFFER

50c. MADE IN A MINUTE! If you
will help us in the
P. O., or some public
place, the two show
bills that we send, we will give you a 50c. cert., and send it in
advance with samples and bills. This will trouble you about
one minute, and then if you want to work on salary at \$50
or \$100 per month, let us know. We pay in advance.
GIANT OXIE CO., 21 Willow St., Augusta, Me.

MISS BEACH'S
Curling Fluid.

Keeps the hair in curl for days
innocent as cologne. A toilet
necessity. Not sent on trial.

30,000 Ladies Have Endorsed It
At druggists, or prepaid, 50c.
LADY AGENTS WANTED.

DENISON CHEMICAL CO.,

56 (C) LaSalle St., Chicago, Ill.

OPIUM

or Morphine Habit Cured at
Home. Trial Free. No Pain.
Comp'd Oxygen Air, N. Ft. Wayne, Ind.

Fat People

You can reduce your weight
10 to 15 lbs. a month at home
without starving or injury by
Dr. Clarke's Home Treatment. Proofs, Testi-
monials Free. F. B. Clarke, M. D. Drawer 133, Chicago, Ill.

OPIUM

Morphine Habit Cured in 10
to 20 days. No pay till cured.
Dr. J. Stephens, Lebanon, O.

RUPTURE

Positive Cure. By mail. Send
for circular. Address Capt. W. A.
Collings, Smithville, Jefferson Co., NY

CANCER

AND TUMORS scientifically
treated and cured. No knife.
Book Free. Drs. GRANTY & NORMAN
163 Elm Street, Cincinnati, Ohio.

VARICOCELE

We will send
you the
MARVELOUS
French reme-
dy CATHOS free. It is an absolute and perma-
nent cure. Use it and pay if satisfied. Address
Von Mohl Co., Sole Agents, Cincinnati, O.

PILES

Remedy Free. INSTANT RELIEF. Final
cure in 10 days. Never returns; no purge;
no salve; no suppositor. A victim tried
in vain every remedy has discovered a
simple cure, which will mail free to his fellow suf-
ferers. Address J. H. REEVES, Box 3290, New York City, N. Y.

DEAFNESS & HEAD NOISES CURED

by Peck's Luvible Tubular Ear Cushions. Whispers
heard. Success! when all remedies fail. Sold FREE
only by F. Husco, 533 B'way, N. Y. Write for book of proofs.

If afflicted with

sore eyes use **Dr. Thompson's Eye-Water**

RUPTURE

Recent Publications.

EXPERIMENT STATION BULLETINS.

Sent free, on application, to residents of the state in which the station is located. Address Agricultural Experiment Station.

ALABAMA.—(Canebrake Station Uniontown) Bulletin No. 15, July, 1892. Cattle feeding.

ARKANSAS.—(Fayetteville) Bulletin No. 19, May, 1892. Manures and some principles in farm manuring.

AUSTRALIA.—(Brisbane, Queensland) Bulletin No. 17, May, 1892. Tree planting for shade and ornament.

FLORIDA.—(Lake City) Bulletin No. 17. Analysis of the orange. Hornfly. Questions concerning stock diseases.

GEORGIA.—(Experiment) Bulletin No. 17½, July, 1892. The air and the soil in their relations to agriculture.

JAPAN.—(Imperial University, College of Agriculture, Komaba, Tokyo) Bulletin No. 11, July, 1892. Manuring. Experiments with paddy rice, third year.

KENTUCKY.—(Lexington) Bulletin No. 41, July, 1892. Commercial fertilizers.

MAINE.—(Orono) Annual report, for 1891, part 4.

MARYLAND.—(College Park) Bulletin No. 16, March, 1892. Wheat insects. Special bulletin H. Government direction of agriculture in Europe.

MASSACHUSETTS.—(Hatch Station, Amhurst) Meteorological summary for July, 1892.

MISSISSIPPI.—(Agricultural College P. O.) Bulletin No. 21, June, 1892. Insects injurious to the cabbage. A new method for testing milk. Feeding for milk and butter.

NEVADA.—(Reno) Bulletin No. 17, July, 1892. The woolly-aphis of the apple.

NEW YORK.—(Cornell Station, Ithaca) Bulletin No. 33, June, 1892. The cultivated and native plums and cherries. Bulletin No. 39, July, 1892. Creaming and skimming milk. Bulletin No. 40, July, 1892. Removing tassels from corn.

NEW YORK.—(State Station, Geneva) Bulletin No. 42, May, 1892. Analyses of commercial fertilizers. Tenth annual report, for 1891.

NEW JERSEY.—(New Brunswick) Bulletin No. 88, July 8, 1892. Analyses of home mixtures and incomplete fertilizers.

NORTH CAROLINA.—(Raleigh) Bulletin No. 86, c. Meteorological summary for May.

NORTH DAKOTA.—(Fargo) Bulletin No. 6, June, 1892. The mustard family.

ONTARIO.—(Agricultural College, Guelph) Bulletin No. 75. Butter making on the farm in summer. Bulletin No. 76. Butter fat in milk and cream.

RHODE ISLAND.—(Kingston) Bulletin No. 16; May, 1892. The new fertilizer law for Rhode Island. Selling prices of fertilizer stock. Analyses of commercial fertilizers. Miscellaneous analyses. Bulletin No. 17, June, 1892. Analyses of commercial fertilizers. Fourth annual report, for 1891.

SOUTH CAROLINA.—(Fort Hill) Bulletin No. 6, July, 1892. Analyses of commercial fertilizers. Bulletin No. 5. Methods of keeping sweet potatoes.

SOUTH DAKOTA.—(Brookings) Bulletin No. 31, May, 1892. Meteorology.

UTAH.—(Logan) Bulletin No. 15, August, 1892. Green versus dry food for steers. Bulletin No. 16, August, 1892. The digestibility of green and dry timothy.

WASHINGTON.—(Pullman) Bulletin No. 4, May, 1892. Wireworms. Bulletin No. 5. Report of Farmers' Institute held at Peabody.

WEST VIRGINIA.—(Morgantown) Bulletin No. 23, May, 1892. Your weeds and your neighbors.

UNITED STATES DEPARTMENT OF AGRICULTURE.—(Washington D. C.) Office of Experiment Stations. Experiment Station Record, Vol. 3, Nos. 11 and 12. Experiment station bulletin No. 12. Organization lists of the agricultural experiment stations and agricultural schools and colleges in the United States. Farmers' bulletin No. 9. Milk fermentations and their relations to dairying. Fiber investigations. Report No. 4. Flax culture for fiber in the United States, including special reports on flax culture in Ireland, Belgium, Austria and Russia. Division of Statistics. Report on area of corn, potatoes and tobacco and condition of growing crops, July, 1892. Division of Chemistry. Bulletin No. 33. Experiments with sugar-beets in 1891. Division of Entomology. Bulletin No. 26. Reports of observations and experiments in the practical work of the division, 1891. Weather Bureau. Report of the chief for 1891. Bulletin No. 2. Notes on a new method for the discussion of magnetic observations. Bulletin No. 3. A report on the relations of soil to climate.

\$15.00 Picture in Heavy Gold Frame for **\$2.50**
AND EVERY PURCHASER WILL RECEIVE
One Year's Subscription to this paper Free.

An Agency for the Great Historical Picture, "Columbus at the Royal Court of Spain," is a veritable

BONANZA FOR AGENTS.

SIZE OF PICTURE, 20 by 28 INCHES. SIZE OF FRAME, 31 by 40 INCHES.
Made of Heavy Gold Molding 6 Inches Wide.

We want an agent in every locality. Farmers, Mechanics, Clerks, Teachers, Students, Ladies, no matter what their employment, can make more money than they ever made before. Former experience is unnecessary. We teach you how and put you on the sure road to success. Every mail brings letters from beginners filled with flattering reports and brim full of enthusiasm. No article appeals to the people, to every member of a household, as strongly as a beautiful picture. The picture sells itself.

Are You Unemployed?

Have You any Idle Days?

Do You Want to Make Money?

Are Your Wages Small?

Have You Little Capital?

Do You Want to Make it Fast?

IT IS THE BEST PAYING BUSINESS YOU CAN ENGAGE IN.

The picture has arrived, and I have averaged 2 orders per hour. It is the best thing I have ever canvassed for.
F. E. Schultz, N. Y.
August 11, 1892.

Have canvassed about 4 days and taken 23 orders. The picture takes well, and is received by nearly everyone with the united exclamation, "How beautiful and how cheap."
Chas. A. Perkins, Mo.
August 30, 1892.

Your picture is received, and it is magnificent. My little girl went out with it a little while and took 8 orders.
P. G. Wiley, Ohio.
August 6, 1892.

What Others Can Do, You Can Do.

I received my picture in elegant shape and am more than pleased with it. My first afternoon I took 5 orders in 2 hours.
W. E. Spence,
July 30, 1892. Kansas.

I have canvassed only 3 days and sold 33 framed pictures. * * * I am expecting to go to the World's Fair free, and don't you forget it.
Robert R. Noble,
July 16, 1892. New Jersey.

I have canvassed but two days and have taken 11 orders for framed pictures. Everyone is pleased with it.
Alice Stores, Ohio.
August 25, 1892.

AGENTS ARE OFFERED A FREE TRIP TO THE WORLD'S FAIR.

The best season of the year is here. Act quick. A day's delay means the loss of Dollars. Send us only \$2.50 and we will ship you by next express one of these magnificent pictures, and mail you this paper one year Free; or, if you are already a subscriber, one year will be added to your present subscription.

EXPRESS CHARGES PREPAID BY US

and all states east of them. Persons ordering from any point west of these states may send us only \$1.50, they paying the express charges upon receipt of the picture, which is carried at a special low rate by all the express companies. Give your express station if different from your post-office.

Write at once for our liberal terms to agents. Address

FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

LIDA CLARKSON'S FAMOUS PANSY FRIEZE

FULL
SIZE
9½ BY 40
INCHES.



AN
EVER
BLOOMING
PANSY
BED.

IN NATURE'S BEAUTIFUL COLORS.

This peerless pansy piece seems actually to possess the delicate freshness of the newly-plucked blossoms, retaining in reality the rich, velvety texture of each beautifully-tinted petal. This one piece has made the artist famous, and it is to-day the best study of this exquisite flower in existence. It has never been sold before for less than One Dollar.

We have been successful in securing this celebrated flower piece for the benefit of our many readers, and will mail one copy of this famous

\$1.00 PANSY FRIEZE **FREE**

To any one sending us only two subscribers to either Ladies Home Companion or Farm and Fireside at the regular subscription price, 50 cents each. They may be either new subscribers or renewals.

PRICE, including one year's subscription to either paper, only 75 cents.

Accept this offer at once, for we cannot assure an unlimited supply. Order by Premium No. 460, and address

FARM AND FIRESIDE, Philadelphia, Pa., or Springfield, Ohio.

INDEX TO FARM AND FIRESIDE.

VOLUME XV.—October 1, 1891, to September 15, 1892.

Articles are indexed under departments and by the number of the issue in which they appear. The volume begins with the first of October, and the semi-monthly issues are numbered regularly from 1 to 24. The articles marked thus * are illustrated.

Current Comment.

Agriculture in president's message.....	7
American Indian corn in Europe.....	6
Australian ballot system.....	16
Beet sugar.....15, 16, 20	
Billion dollar country.....	23
Butter and wheat.....	11, 13
Coal combine.....11, 13, 15	
Congressional committees on tariff and currency.....	8
Corn crop of 1891.....	2
for 1892.....	16
Cotton depression—cause and cure.....	13
speculation in.....	11
Cream-separator and butter-extractor.....	15
Dairying.....17, 18, 19, 22	
Detmers, Dr. H. J., biographical sketch.....	19
Directory.....13, 14	
Experiment station, new location of Ohio.....	1
Farm labor, wages of.....	18
Farmers' Alliance.....1, 5, 8	
Fertilizers.....11	
Flour of the future.....	11
Foreign commerce of the United States.....3, 24	
Fractional currency.....	10
Gerrymandering, Gov. McKinley on.....	6
Government revenues and expenditures.....	6
Granular butter.....	8
Heap binder twine.....	16
culture.....	17
Irrigation congress.....	3
Labor in U. S., report of commissioner.....	7
Land loan bill.....	14
Liquor business.....	4
Manufacturing, profits in.....	13
Monetary conference, international.....12, 19	
Money question.....4, 15	
saving.....	16
Monopoly stocks, warning against.....	14
National Grange, annual session.....	6
League for Protection of American Institutions.....	23
Nitrogen, atmospheric.....	1
and clover.....	8
Nutrition in skim-milk.....	24
Ohio exhibitors at Columbian exposition.....	17
State Grange, annual session.....	5
university free scholarships.....	23
Paddock pure food bill.....13, 14	
Party platforms on money and tariff.....	20
Peoples party in Ohio.....	4
Pork, foreign laws against.....1, 15	
Premium list.....	1
Preventive inoculation against swine-plague.....	19
Railway passenger rates.....	14
Reciprocity.....3, 7, 9, 13	
Read exhibit at Columbian exposition.....	15
Roads.....1, 5, 9, 11, 13	
ancient Peruvian.....	10
Gov. McKinley.....	10
in foreign countries.....	12
Rural free mail delivery.....	2, 5, 9, 10
Russian famine.....12, 14	
Seed catalogues.....	8
farms.....	2
Senate committee on results of tariff legislation.....	2
Senators by direct vote.....10, 12	
Skim-milk.....	23
Signal's Lily Flag.....	12
Silver certificates.....	2
coinage.....	11
Senator Carlisle on.....	10
Spraying fruit.....	2
Standard Oil Trust.....12, 13	
Tariff.....2, 7, 9	
Taxation.....	2
amendment, Ohio.....	2
Testing new seeds and plants.....	8
Tin-plate.....	10
Transportation rates.....	8
Wheat and butter.....	23
crop of 1891.....	9
culture.....	23
exports.....	9
prices.....	6
varieties.....	22
Wool at Columbian exposition.....	17
tariff.....	9, 12

Farm.

Alfalfa.....24	
American Pomological Society.....	3
Antiseptics and salivary digestion.....	9
April's smiles and tears.....	14
Ashes, substitutes for.....	23
Balletta onion.....	15
Barr's.....	15
Beets for sugar.....	15
Bird in hand.....	16
Black birch-oil.....	24
Black-knot on cherries and plums.....	20
Bokhara clover.....	24
Bordeaux mixture.....13, 15	
Bug study.....	6
Bull, the.....	24
Butter making.....	11
Can richness be fed into milk.....	4
Catch crops for sheep.....	20
Celery culture.....	21
Cellars, frost-proof.....	3
Chestnuts for profit.....	2
Choice of location.....	20
Clean culture.....	19
Clover on light soil.....	8
Common cow.....	2
Concrete.....	4
Co-operative creameries.....	21, 24
creamery business.....	23
fresh beef.....	23
Corn-critch.....	16
Corn culture.....	20
Cost of milk.....	21
Cost of plant-foods.....	23
Cotton depression—cause and cure.....13, 14	
Cotton-seed meal and bran.....	6
Cow-peas.....	5
Crossing and hybridizing.....	13
Cucumber forcing.....	13
Dairying a horse.....	16
Dairying in eastern Scotland.....	1
Depression in the price of wheat.....	17
Draft horses for farms.....	24
Dyspeptic farmer.....	20
Educated farmer.....	9
Electrical building at Columbian exposition.....	18
Ensilage and dairy.....	19
Errors of judgment in American agriculture.....	12
Ethical view of speculation.....	7
Experiment stations.....	13
Farm fences.....	23
Farmers' workshop.....	5
Feeding hens for eggs.....	9

GARDEN GOSSIP.

Apple and peach tree borers.....	16
Bordeaux mixture.....	20
Cabbage and cauliflowers.....	16
wintering.....	1
worms.....	19
Carpeting the garden.....	22
Celery.....5, 15	
blanching.....	1
light.....	1
for late keeping.....	5
with irrigation at Puget Sound.....	8
Cheambers not fruiting.....	19
Currants and gooseberries.....	13
Drills and cultivators.....	19
Dry leaves.....	5
Early start, an.....	13
Egg-plant, new.....	3
Fall plowing.....	5
Flats for hotbeds.....	25
Floral displays.....	2
Free mail delivery.....	12
Freeman potato.....	16
Frosts, late.....	16
Fruits for farmers.....	21
Garden corner.....	8
marker.....	15
Hotbed making.....	11
and cold-frames.....	10
Irrigating garden crops.....	4
plant, an.....	6
Kill the bugs.....	25
Mushroom.....	12
Onion growing notes on.....	12
Onions.....18	
storage-house.....	4
Peas.....20	
growing garden.....	8
Peppermint industry.....	10
Plans for next season.....	5
Plant supports.....	18
Potatoes.....20	
early.....	13
insects in poultry-house.....	2
storage-house.....	4
Radish, California winter.....	16
Seedsman's catalogue.....	16
Seed versus frost.....	22
Soja bean.....	14
Sowing fine seeds.....	12
Squash-bugs.....	19
growing and storing.....	1
Success in market gardening and fruit growing.....	7
Sweet potatoes, growing and keeping.....	24
Sweet potato sports.....	18
Tomatoes.....18	
early.....	14
Tomatoes for canning.....	15
now.....	3, 11

Tomato-plants, buying.....	17
Tomato seeds, saving.....	24
Vegetable beds, permanent.....	2
Vegetables in Europe and America.....17	
Weeds, killing.....	22
What soil is good for.....	18
Wire for tying up vegetables.....	10

ORCHARD.

Bordeaux mixture.....	6
Burning over strawberry beds.....	10
Codling-moth, trapping the.....	12
Copper on sprayed fruit.....	19
Dulness, as good as.....	2
Farmer's fourth-acre fruit garden.....	7
Filling around trees.....	14
Fruitfulness, to promote.....	10
Grapes, shipping.....	12
Iowa raspberry notes.....	8
Luscious fruiting.....	12
Lovett's hes-blackberry.....	24
Marian plum stocks.....	16
Native tree fruits.....	16
Nitrate of soda for small fruits.....	11
Orchard notes.....	11
Otaheite orange.....	24
Peach-trees, winter protection of.....9, 18	
Pear-blight.....	9
Pear-tree slug.....	1
Pruning.....	11
Raspberries.....	13
Rotten apple-cider.....	13
Strawberry varieties.....	20
pitillate and bisexual.....	2
Sulphurizing dried fruits.....	5
Vineyardists, hints for.....	2

POULTRY.

Ages for mating fowls.....	6
Arrangements of the house.....	9
Bakers' refuse.....	21
Bantams.....	24
Beans and peas for poultry.....	13
Begin the new year right.....	7
Better prices.....	9
Bone-meal.....5, 22	
Bowel disease of chicks.....	8
Bran and oats in summer.....	17
Breeds for farmers.....	20
laying.....	1
new.....	1
Broilers in Chicago.....	14
Broken eggs as frit.....	18
Broom-corn and sorghum seed.....	22
Brown Leghorns.....	12
Buckwheat and millet.....	10
Bulky food.....	7
Burn over the yards.....	2
Buttermilk.....	2
Buying pure breeds for improvement.....18	
Cabbage for hens.....	2
Castor-oil for chicks.....	15
Cheap foods for winter.....	2
Chicken-coop.....	25
Chicks and snow.....	12, 13
Cholera.....	12, 13
Cochin fowls.....	6
Combs of Leghorns.....	6
Commission merchant.....	2
Convenient dust-baths.....	17
Cooked food for winter.....	2
Corn as food.....	2
Cost of poultry.....	1
Covered run, movable.....*	3
Crossing for chicks.....	24
Crossing for increase of eggs.....15, 16	
Leghorns.....14	
Cutting the wings.....	14
Dalmatian insect-powder.....	14
Damp floors.....	6
Dogs eating eggs.....	18
Dominiques.....	10
Double walls.....	7
Dressed poultry.....	23
Dry dirt.....	20
Food in winter.....	11
Ducks, breeding.....	8
feeding.....	23
for laying.....	21
keeping.....	19
young.....	12
Early chicks and their food.....	4
Eggs and the sitting hen.....	4
for hatching.....	9
in September.....	23
Ensilage in barrels.....	19
Equalizing foods.....	10
Everything movable.....	3
Excellent food.....	16
Exercise for chicks.....	5
Extra large eggs and feeding.....	2

False economy.....	24
Farmers' flocks.....	2
Fat hens and layers.....	15
Fattening growing chicks.....	15
Feathering chicks.....	12
Feeding-coops for chicks.....	21
Fowls.....20	
hens on the farm.....	6
mixed lots.....	13
red peppers.....	3
useless birds.....	11
Fence, cheap.....	1
Fifth and disease.....	22
Floors of brooders.....	3
Fowls in confinement.....	19
Frosted combs.....	11
Fumigating for lice.....	12
Gapes.....19, 23, 24	
Garden and poultry.....	14
Geese, feeding.....	23
on the farm.....	18
Get your bees.....	2
Grease on chicks.....	2
Hatching early pullets.....	17
broilers.....	24
Heated terns and fowls.....	23
Heater for poultry-houses.....	8
Hen manure compost.....	9
Hens carrying ducklings.....	2
or pullets.....	2
Home market.....	2
Houses, poultry.....*	4
cleaning.....	23
double.....	23
for laying ducks.....	23
light.....	23
two story.....	11
with glass runs.....	11
"underneath run".....	16
How many eggs to the pound.....	18
Incubator production.....	21
Incubator hatches.....	17
Incubators.....1, 13	
Insects in poultry-house.....	2
Keep ducklings from ponds.....	15
Keeping food before fowls.....	24
the poultry-house clean.....	24
Kerosene emulsion.....	16
on roosts.....	21
Killing and dressing poultry.....	22
Lameness.....	3
of young poultry.....	22
Leg weakness.....	7
Let your hens.....	1
Lice.....3, 12, 17, 20, 21	
Light Brahma crosses.....	18
Lime for the shells.....	6
Linseed-meal bread.....	14
Losses will happen.....	21
Lousy hens.....	22

Make a home market.....	20
Males for next year.....	16
Manure, poultry.....	2
Mating for hardiness.....	17
Meat a necessity.....	24
Minks and hawks.....	10
Minoreas.....	1
Mixed food.....	11
Mounting hens.....	21
Nest, movable.....	14
to prevent egg-eating.....	5
No eggs.....	12
Non-sitters.....	24
Overfeeding laying hens.....	17
Over-supply in market.....	23
Peach-trees in poultry-yard.....	10
Pear-comb on fowls.....	19
Perch and droppings board.....	24
Point on when to sell.....	19
Poultry as insect destroyers.....	15
at fairs.....	1, 24
in Minnesota.....	19
shows.....	7
Preserving green food for winter.....	9
Trichinomyia chain.....	19
Pure breeds, crosses.....	12
and farmers.....	12
Prunifying the yards.....	20
Quick profits.....	20
Records and reports of flocks.....12, 14, 15, 17, 20	
Refuse from factories.....	3
Roof for poultry-house.....	6
Room for all.....	6
Roosts, high.....	1
ice-proof.....	1
movable.....	14
Scabby legs in summer.....	5, 6, 11
Soft foods.....	24
Sour milk.....	24
Tarred paper for roofing.....	1
Too much weight.....	3
Turkeys, fatten the.....	3, 21
mating.....	9
White Holland.....5, 8, 13	
Use the purlane.....	21
Utilizing space.....	6
Value of the range.....	20
Ventilation.....5, 21	
Warming a poultry-house.....	8
Warm water.....	8
Water-fountains, cleaning.....	7
Watering poultry in winter.....	5
Water-pan, non-freezing.....	7
Water-troughs.....	23
Wet or dry food.....	3
Windows of poultry-house.....	13
Wire fences.....	6
Women and poultry raising.....	12
Wooden troughs.....	6

CORRESPONDENCE.

Alabama.....13, 18, 23, 24	
Arkansas.....4, 7, 9, 19, 22	
California.....16, 19, 20, 23	
Colorado.....13, 14, 17	
Florida.....3, 7, 21	
Georgia.....19	
Illinois.....1, 9, 13, 14, 15, 19	
Iowa.....1, 4, 10, 20	
Kansas.....4, 5, 12, 14, 15, 18	
Kentucky.....1	
Michigan.....1, 11, 22	
Minnesota.....10, 12, 14, 21	
Mississippi.....17, 18, 19, 21, 22	
Missouri.....24	
Nebraska.....1, 2, 6, 9, 11, 12	
New Hampshire.....15, 17, 24	
New York.....17	
North Dakota.....5	
Ohio.....16	
Oklahoma.....4, 16	
Oregon.....3, 4, 5, 8, 9, 11, 13	
South Carolina.....1, 19, 23	
Texas.....2, 4	
Vermont.....15	
Washington.....1, 6, 12, 13	
West Virginia.....19	

Fireside.

Active mind, an.....	24
All work and no play.....	2
American woman in Japan, an.....	24
An old love affair.....	12
overcoat tragedy.....	18
Are farmers shiftless.....	4
Annt Jack's secret.....*, 9, 10	
Autumn care of roses.....	10
Beauty secret.....	23
Don't Nyo wagon roads.....	24
Birds prefer drab nests.....	4
Bish on birds.....	4
Calm thought.....	1
Cheap electricity.....	19
Chidister brothers.....	19
Commonest possible story.....	20
Concerning women.....	20
Crystallizing fruit.....	1
Dainty room.....	3
Do pearls get ill.....	3
Do you want to also.....	21
Dolore's baby.....	16
Don't for grandmothers.....	16
Each for the other.....	1
Earth's balance.....	1
Economy of the Egyptians.....	18
Effigy mound builders.....	12
Face massage.....	15
Fame.....	17
Farmer's shop, the.....	16
Followed his pet to his fate.....	3
For his health.....	4
Framing pictures.....	17
Freights and farmers.....	14
Frugal diet claim.....	2
From top to toe.....	24
Fruit they eat, the.....	1
Girl that wins.....	1
Girls.....13	
Give the boys a trade.....	13
Glass of water at bed-time.....	17
Glycerine, uses of.....	4
Government note-paper.....	2
positions for young men.....	17
Grand Columbus fete.....	16
Great tiller of the soil.....	3
Johnson's fortune.....	24
Love in the home life.....	3
Making good roads.....	23
Margherita of the east side.....	3
Marriage as a life preserver.....	3
Miss Liddy's wedding gown.....	15
Modern girl, the.....	15
Names of states.....	19
Napoleon's wooling.....	21
Nature's make of beeswax.....	14
Natural vessels.....	3
Necessary things.....	1
New Cinderella.....	22
New York patriotism.....	3
No genuine photographs.....	17
Novel spoon-case.....	3
Novel use of ammonia.....	24
Odds and ends.....	19
One penny.....	3
One way to keep burglars off.....	2
Ornamental claim.....	14
Out of the mouth of babes.....	16
Passing things on.....	16
Piano.....	17
Picking teeth at the table.....	23
Postponed courtship, a.....	11
Prodigal daughter, the.....	14
Purple and fine linen.....	22

Railway sprinkler.....	1
Razors.....13	
Red cross work.....	18
Runaway, the.....	16
Saving world.....	19
Secret of youth.....	19
Short and sweet.....	21
Signature of yours, that.....	21
Simple precaution.....	19
relief for lung troubles.....	19
Some days.....	24
Speaking to horses.....	12
Story of a dream.....	21
Strawberries.....	2
Swedish wedding march.....	21
Table-linen.....	1
Talk from a horse.....	16
Talking with monkeys.....	24
Tea, to make.....	21
Things the queen may not do.....	15
worth knowing.....	1
Three good business rules.....	16
Through Suez.....	5
Too much hurry.....	1
Trachinomyia chain.....	19
Trichinomyia chain.....	19

\$50 Down Buys a Farm-In Crop!

If you want an 80-acre farm in a good neighborhood; near railroads; good buildings and fences and now in crop, send to-day for my lists. 80, 160, 320-acres at prices from \$2.50 to \$20.00 per acre!

As my terms are ten years time and only

One-Tenth in Cash

any live farmer can make his crops "pay him out." This is better than raw land at any price. Pays an income from the beginning.

OTIS A. TURNER,
Room 5, New England Bldg, Kansas City, Mo.

ENGINES

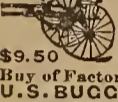
If you want to buy a strictly first-class outfit at low figures, address The W.C. LEFFEL CO., Greenmount Av. SPRINGFIELD, O.



BICYCLES ON EASY PAYMENTS. No extra charge. All makes new or 2d hand. Lowest price guaranteed. Largest stock and oldest dealers in U.S. Catalogue free. Agents wanted. Rouse, Hazard & Co., 32 E. St., Peoria, Ill.

BUGGIES

CARTS & HARNESS at 1/2 Price. We Cut the Prices and outsell all competitors. \$100 Top Carriage \$47.50 \$80 Top Buggy \$38.00 \$20 Two Man Cart \$9.50 \$30 Team Harness \$12.50 \$10 Buggy Harness \$4.75 Buy of Factory and save Middleman's Profit. Catalogue free. U.S. BUGGY & CART CO., 17 Law St. Cincinnati, O.



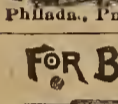
QUAKER CITY GRINDING MILL For CORN and COBS, FEED and TABLE MEAL. Send for all mills advertised. Keep the best and return all others. A. W. STRAUB & CO., Philada., Pa. and 51 S. Jefferson St., Chicago, Ill.



FOR BEST HAY PRESSES STEEL PRESSES. SELF FEEDER. ADDRESS P.K. DEDERICK & CO., 10 DEDERICK'S WORKS, ALBANY, N.Y. Mention where you saw this advertisement.



COLUMBIA STEEL Wind Mill New in Principle. Beautiful in Appearance. POWERFUL IN OPERATION. Contains COVERED INTERNAL GEAR. UNEQUALED IN THE LINE OF Pumping Wind Mills. We solicit the closest investigation. Also COLUMBIA Steel Derricks, Iron Turbine Wind Engines, BUCKEYE Force & Lift Pumps, Tank & Spray Pumps, BUCKEYE & GLOBE Lawn Mowers, Iron Fencing, Cresting, &c. Write for circulars. MAST, FOOS & CO., SPRINGFIELD, OHIO.



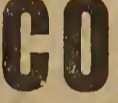
ERTEL'S VICTOR HAY PRESS SHIPPED ANYWHERE TO DATE ON TRIAL AGAINST ALL OTHER HAY PRESSES. PURCHASER TO KEEP ONE DOING MOST AND BEST WORK. GEO. ERTEL & CO., QUINCY, ILL.



WELL DRILLING MACHINERY, MANUFACTURED BY WILLIAMS BROTHERS, ITHACA, N. Y., Successors to the Empire Well Auger Co., Mounted and on Sills, for deep or shallow wells, with steam or horse power. Send for Catalogue. ADDRESS Williams Brothers ITHACA, N. Y.



Milk PRESERVATIVE. Milkmen, Creamerymen and Dairy-men can keep Milk and Cream fresh a week without using ice. Healthful, tasteless, odorless and inexpensive. SAMPLE enough to make test, mailed for ten cents. The Preservative Mfg. Co., 10 Cedar St., New York.



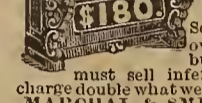
ALFRED PEATS THE Wall Paper Merchant. will send you his guide, "HOW TO PAPER," and 100 beautiful samples of fine

WALL PAPER

Good Paper, 3c. Gold Paper, 5c. **FREE** Handsome Gold Parlor Paper 10, 12 1/2 and 15c per roll, all with wide borders and ceilings to match. Will refer you to 10,000 Well Satisfied Customers. Agents' sample book, \$1. ALFRED PEATS, 136-138 W. Madison St., Chicago.



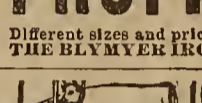
PRICE We Sell DIRECT to FAMILIES PIANOS ORGANS \$150 to \$1500 \$85 to \$500. Absolutely Perfect! Sent for trial in your own home before you buy. Local Agents must sell inferior instruments or charge double what we ask. Catalogue free. MARCHAL & SMITH PIANO CO., 235 East 21st St., N.Y.



FRUIT EVAPORATOR THE ZIMMERMAN The Standard Machine Different sizes and prices. Illustrated Catalogue free. THE BLYMYER IRON WORKS CO., Cincinnati, O.



COOPER'S SHEEP DIP. Cures Scab. Kills ticks and lice. Improves both sheep and wool. \$2.00 packet makes 100 gallons. Order of F. S. BUCH, 178 Michigan St., Chicago.



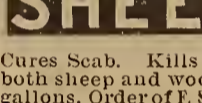
BEFORE YOU BUY A NEW HARNESS send a 2c. stamp with your address for 72-page Illustrated Catalogue of 65 different styles of hand-made PURE OAK LEATHER HARNESS. Single Sets, \$7 up; Double Sets, \$10 up. Every harness Warranted and Shipped subject to approval. It costs only a 2-cent stamp to know what we can do for you. TRY IT. King & Co., Wholesale Mfrs., No. 5 Church St., Oswego, N.Y. Mention Farm and Fireside.



KEMP'S DOUBLE CAM HAY PRESS FULL 2 FEEDS TO EVERY ROUND. Spring Folder. AUTOMATIC FLUNGER DRAW. GIVEN FREE. IF IT WILL NOT do all my circular claim. Send for free circulars giving full information. JAS. KEMP, Kempton, Ill. Mention this paper when you write.



THIS MACHINE \$12 You can give this elegant machine a thorough test before sending us one cent. TRIAL FREE. All attachments free. Every machine warranted 5 years. For catalog, full particulars, etc., cut this ad. out and send to us to-day. ALVIN MFG. CO., Dept. B 23 Chicago, Ill.



TIME IS MONEY WHICH YOU CAN SAVE BY USING THE Queen Washing Machine. One washer sold at wholesale price where we have no agent. For full particulars and catalogue, address The Buckeye Churn Co., P. O. Box 68, Sidney, Ohio. Mention Farm and Fireside.



Burr-Stone Grinding Mills We offer you the best mill on the market at such a low figure it will pay you to write to us. They are the best constructed, least complicated and fastest grinding mills yet produced. SATISFACTION GUARANTEED. Send 2c. stamp for our 48-page Illustrated Catalogue. LEONARD D. HARRISON, Box A, NEW HAVEN, CONN. Mention this paper when you write.

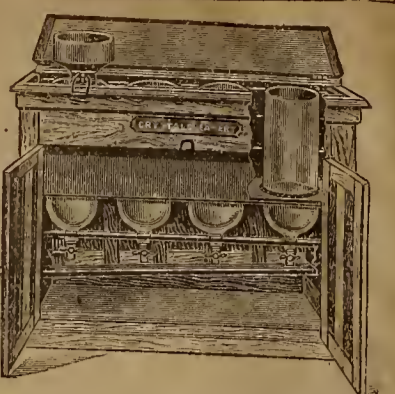


IDEAL In Name and In Fact. **STEEL WIND MILL** and Three Post STEEL TOWER. The LATEST and BEST. Sizes 8-9-12 ft. Geared. 10 and 12 ft. Ungear. TOWERS, 30, 40, 50 & 60-ft. Mills with or without graphite bearings. STOVER MFG. CO., 607 River St., FREEPORT, ILL. MENTION THIS PAPER WHEN ANSWERING ADVERTISEMENTS.



Kneeland's Crystal Creamery Only Creamery with Glass Milk Cans and Steel Plate Water Tanks. CREAM WITH OR WITHOUT ICE. Practicable, Durable, Simple, Perfect, Profitable. Non-rusting, Non-corrosive, no Leaking. Sediment removed by bottom skimming. No dipping or slopping of milk or cream. Glass cans give more and better cream and butter. A perfect "Baby Separator" for small dairies. Send for catalogues to Crystal Creamery Co., Agents wanted. Cut prices to first purchaser. Lansing, Mich.

FARM FENCE



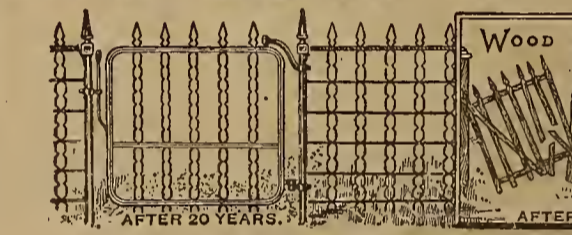
Made of Best Galvanized STEEL WIRE. Best Fence and Gates for all purposes. Write for catalogue giving full particulars. THE SEDGWICK BROS. CO. Richmond, Ind.

HARNESS

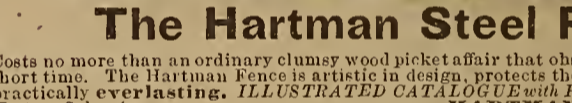
FROM \$5.00 UPWARDS. This cut shows our \$5.50 Harness which we make a specialty of and DEFY COMPETITION. We also manufacture a complete line of GOAT and DOG HARNESS from \$1.50 to \$12.50 per set. GOAT or DOG CARTS from \$4.00 to \$7.00. Write for GOAT CATALOGUE. For 22 consecutive years we have manufactured and sold to dealers, BUT NOW we are selling direct to consumers, saving you the traveling man's expenses and dealer's profit. Write for illustrated catalogue and prices. FRANK B. BARKLEY MFG. CO., 282 & 284 Main St., CINCINNATI, O. Mention Farm and Fireside when answering this advertisement.



THE COST IS THE SAME The Hartman Steel Picket Fence. Costs no more than an ordinary clumsy wood picket affair that obstructs the view and will rot or fall apart in a short time. The Hartman Fence is artistic in design, protects the grounds without concealing them and is practically everlasting. ILLUSTRATED CATALOGUE with PRICES and TESTIMONIALS Mailed FREE. HARTMAN MFG. CO., BEAVER FALLS, PA. Eastern Sales Agency, 102 Chambers St., New York; Southern Sales Agency, 51 and 53 S. Forsyth St., Atlanta, Ga. T. D. Gause, General Western Sales Agent, 508 State Street, Chicago, Illinois. Be sure to mention this paper when you write.



WOMAN'S COLUMBIAN LAUNDRY CO. Incorporated under the Laws of the State of Illinois. Capital, \$300,000. A GREAT INDUSTRIAL ENTERPRISE. A WOMAN'S COMPANY, OWNED, OPERATED AND MANAGED BY WOMEN. SHARES ARE TEN (\$10.00) DOLLARS EACH, AND ARE SOLD ONLY TO WOMEN. We propose to enlarge our business, and give women of large or small means an opportunity to become identified in an industrial and exceedingly profitable business enterprise, and to establish 100 or more Branch Laundries; for that purpose we have decided to offer 10,000 Shares of our Capital Stock to be Sold Only to Women. Present price, \$10 per share, par value, payable, if desired, in monthly installments of \$2.50 per share. Price of stock will be advanced to \$12.50 per share as soon as the 10,000 shares now offered are sold. A SAFE AND PROFITABLE INVESTMENT. With the complete operation of our laundries we will have a capacity of turning out 100,000 laundered shirts per week, and as the population of Chicago requires many times this number of shirts a week, and as the profit on each shirt is 5 cents, you can readily see that running our full capacity we would be able to make a profit of \$5,000 a week, \$20,000 a month, or \$240,000 a year on shirts alone, to say nothing about revenues to be derived from our other work and departments, which will be large. Taking this, then, as a basis, and that money is worth 8 per cent, we would be enabled to pay a dividend of \$8 on every share of stock. We do not believe it will be less, and it may be more. AN IMPORTANT FEATURE!—Our improved method of doing laundry work gives better satisfaction than any other process, as no chemicals are used, therefore the fibre of the linen is not worn or eaten away. Our business has been established four years; the Company owns it absolutely; it is in daily operation, and, better still, is paying over fifty per cent on the amount invested. HOW MANY SHARES DO YOU WISH? They are only \$10 each. Better secure as many as you can now, as we have only 10,000 shares to offer at this price, and they will be taken very fast. Orders for stock will be filed as received, and all subscriptions received in excess of above amount will be returned to subscribers. No better investment can be found than our capital stock. Invest now, while the Company is new, and reap the benefits paid in dividends, perhaps for the balance of your life. Write to-day and send a small deposit to show us you are in earnest, state how many shares you wish, and we will reserve them for you any reasonable length of time. Full information sent free on application. The Interior, one of the leading religious papers of Chicago, says: "The energy displayed by the officers of the Woman's Columbian Laundry Co. in pushing their undertaking to success, and broadening the foundations of their business, is truly remarkable. They have just closed a number of large contracts for Hotel, Apartment Building and Railroad Laundry work, that will be exceedingly profitable to the fortunate stockholders. 'The work of the Woman's Columbian Laundry Co. is important, and should receive the support of every housewife in the country.'—MARION HARLAND. OFFICERS AND BOARD OF LADY MANAGERS: MRS. SARAH WILDER PRATT, President, Member of the Woman's Club of Chicago. MRS. MARY FRENCH SWARTZ, Vice-President, Author of School Text Books on Mathematics. MRS. ADDIE R. SCHUYLER, 2d Vice-President, Preceptress Central State Normal School of Pennsylvania. MISS I. F. PARSONS, Secretary and Treasurer, Manager the Parsons Stenographic Bureau. MRS. MARY PARSONS, of Chicago. MRS. SALLIE M. MOSES, Member of the Papyrus Club of Chicago. MRS. MARION HARLAND, Author of "Common Sense in the Household," the "Dinner Year Book," etc. Address Correspondence and make Drafts, Checks and Money Orders payable to WOMAN'S COLUMBIAN LAUNDRY CO., 134-142 Washington St., Chicago, Ill. Please mention this paper.



SEND FOR YOURS BEFORE YOU LAY DOWN THIS PAPER.

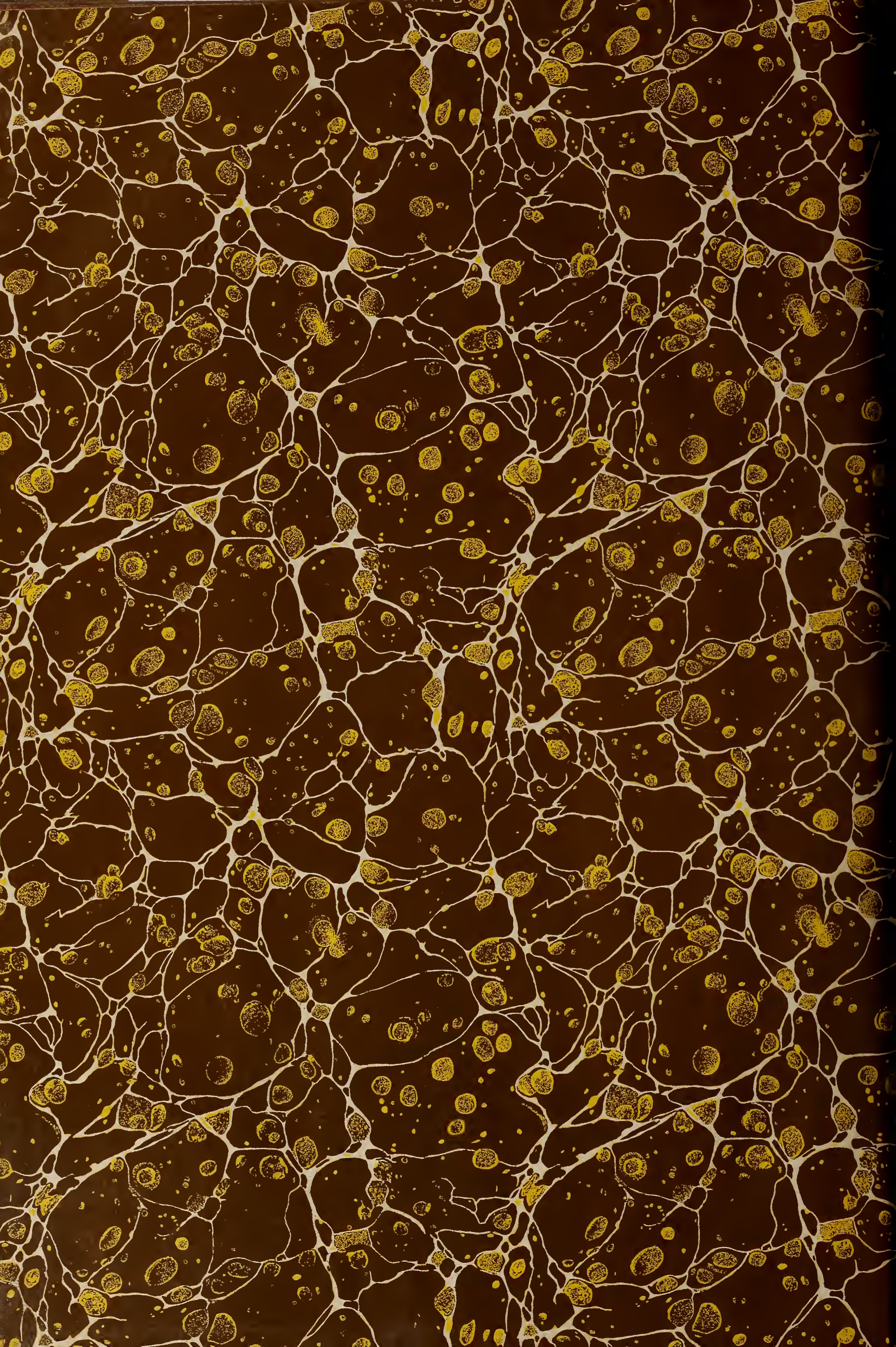
WOMAN'S COLUMBIAN LAUNDRY CO. 134-142 Washington St., Chicago, Ill. Please mention this paper.



WOMAN'S COLUMBIAN LAUNDRY CO. 134-142 Washington St., Chicago, Ill. Please mention this paper.







U. S. DEPARTMENT OF AGRICULTURE
LIBRARY

Please return all books promptly after finishing your use of them, in order that they may be available for reference by other persons who need to use them.

Please do not lend to others the books and periodicals charged to you. Return them to the Library to be charged to the persons who wish them.

The mutilation, destruction, or theft of Library property is punishable by law. (20 Stat. 171, June 15, 1878.)

Lib. 9



• • •

8-7883

